NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

DMS-DR-2010
NASA CR-120,060

DETERMINATION OF THE AERODYNAMIC INTERFERENCE BETWEEN THE SPACE SHUTTLE ORBITER, EXTERNAL TANK, AND SOLID ROCKET BOOSTER ON A 0.004 SCALE ASCENT CONFIGURATION

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

MANNED SPACECRAFT CENTER

HOUSTON, TEXAS

DATA MANagement services
SPACE DIVISION CHRYSLER CORPORATION

April, 1973

DMS-DR-2010
NASA CR-120,060

DETERMINATION OF THE AERODYNAMIC INTERFERENCE BETWEEN THE SPACE SHUTTLE ORBITER, EXTERNAL TANK, AND SOLID ROCKET BOOSTER ON A 0.004 SCALE ASCENT CONFIGURATION

By

P. Ramsey, NASA/MSFC
R. Buchholz, LMSC
E. Allen, Rockwell
J. Dehart, NSI

Prepared under NASA Contract Number NAS9-13247

by

Data Management Services
Chrysler Corporation Space Division
New Orleans, La. 70189

for

Aerodynamics Section
Flight Technology Branch
Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

TEST NUMBER: MSFC-TWT 545

NASA Series No.: IA1

DATE: October 19 - November 28, 1972

FACILITY COORDINATOR:

Mr. Jim Weaver
Marshall Space Flight Center
Mail Stop S&E-AERO-AAE
Huntsville, Alabama 35801

Phone: (205) 453-2512

PROJECT ENGINEERS:

Mr. P. Ramsey
Marshall Space Flight Center
Mail Stop S&E-AERO-AAE
Huntsville, Alabama 35801

Phone: (205) 453-2517

Mr. R. Buchholz
Lockheed Missile & Space Company
Dept. 5420
P. O. Box 1103 West Station
Huntsville, Alabama 35807

Phone: (205) 837-1800 Ext 452

Mr. E. Allen
Rockwell International
Suite 142
3322 S. Memorial Parkway
Huntsville, Alabama 35801

Phone: (205) 881-2200

Mr. J. Dehart
Northrop Services Inc.
6025 Technology Drive
Huntsville, Alabama 35807

Phone: (205) 837-0580

DATA MANAGEMENT SERVICES:

This document was prepared by:

V. W. Sparks
Liaison Operations

J. R. Ziler
Data Operations

This document has been reviewed and is approved for release.

N. D. Kemp
Data Management Services

Chrysler Corporation Space Division assumes no responsibility for the data presented herein other than its display characteristics.

TABLE OF CONTENTS

	Page
ABSTRACT	2
INDEX OF MODEL FIGURES	3
INDEX OF DATA FIGURES	4
NOMENCLATURE	9
MODEL DESCRIPTION AND TUNNEL INSTALLATION	13
CONFIGURATIONS INVESTIGATED	14
TEST FACILITY DESCRIPTION	18
TEST PROCEDURE	19
DATA REDUCTION	20
REFERENCES	25
TABLES	
I. CONFIGURATION AND NOMENCLATURE DESCRIPTION	26
II. TEST CONDITIONS	28
III. DATA SET COLLATIONS	29
IV. DIMENSIONAL DATA	37
MODEL FIGURES	55
DATA FIGURES	67
APPENDIX	
TABULATED SOURCE DATA	

DETERMINATION OF THE AERODYNAMIC INTERFERENCE BETWEEN THE SPACE SHUTTLE ORBITER, EXTERNAL TANK, AND SOLID ROCKET BOOSTER ON A 0.004 SCALE ASCENT CONFIGURATION

By P. Ramsey, R. Buchholz, E. Allen, and J. Dehart

ABSTRACT

The launch configuration of the space shuttle has the orbiter and two solid rocket boosters joined to the external tank. This report presents results of wind tunnel tests on a 0.004 scale model launch (ascent) configuration with multi-internal balance arrangements which allowed determination of aerodynamic interference characteristics between individual components.

Four basic configurations were utilized during the test. They were: (1) modified North American ATP Space Shuttle Launch Vehicle with an ogive nose on the external tank (separate balances used on the orbiter and external tank); (2) configuration (1) without retro-rockets (single sting balance located in the external tank); (3) North American ATP Orbiter alone; and (4) 0.005128 scale model of one solid rocket booster.

Six component aerodynamic force and moment data were recorded over an angle of attack range of -10 to 10 degrees at 0 degree sideslip. A sideslip range of -10 to 10 degrees at 0 degree angle of attack was also tested. Mach number range for the test was varied from 0.6 to 4.96 with Reynolds number varying between 4.9×10^6 and 6.8×10^6 per foot.

INDEX OF MODEL FIGURES

FIGURE	DESCRIPTION	PAGE
1	Axis Systems	55
2	General Arrangement Launch Configuration (T5)(S1)(O1)	56
3	General Arrangement Orbiter O1	57
4	SRB General Layout for S 1/2 Configuration (SRB Alone Test)	58
5	Space Shuttle Parallel Staging System for the MSFC 14 x 14-Inch Trisonic Wind Tunnel	59
6	Wind Tunnel Test Model of External Tank Configurations	60
7	External Tank Nose Dimensions	61
8	General Arrangement SRB S1	62
9	Base Pressure Measuring Tube Locations	63
10	Modified ATP Launch Configuration with the Left SRB Mounted on External Tank (Metric)	64
11	Modified ATP Launch Configuration with Right SRB Mounted on Separate Sting (Non-Metric) Installed in the MSFC 14-Inch TWT	65
12	SRB Alone Configuration	66

INDEX OF DATA FIGURES

TITLE	CONDITIONS VARYING	PLOTTED COEFFICIENTS SCHEDULE	PAGES
Stability Characteristics - Orbiter in Presence of External Tank, 01/T3	ORBINC, DELTAZ, MACH	A, B	1-16
Stability Characteristics - Orbiter in Presence of External Tank, 2 SRB, 01/T3S1	ORBINC, DELTAZ, X-SRB, MACH	A, B	17-52
Stability Characteristics - Retro Removed From External Tank Nose, 01T5S1	MACH	A, B	53-58
Stability Characteristics - Orbiter Alone, 01	ELEVTR, MACH	A, B	59-72
Stability Characteristics - External Tank in Presence of Orbiter, T3/01	ORBINC, DELTAZ, MACH	A, B	73-88
Stability Characteristics - External Tank 2SRB in Presence of Orbiter, T3S1/01	ORBINC, DELTAZ, X-SRB, MACH	A, B	89-124
Stability Characteristics - External Tank and 1SRB in Presence of 1SRB and Orbiter, T3S1/2/S1/2/01	ORBINC, DELTAZ, MACH	A, B	125-140
Stability Characteristics - External Tank in Presence of Orbiter, 2 SRB, T3/S1/01	ORBINC, DELTAZ, X-SRB, MACH	A, B	141-176
Stability Characteristics - Effects of Booster Buildup	Configuration, MACH	A, B	177-193

INDEX OF DATA FIGURES - Continued.

TITLE	CONDITIONS VARYING	PLOTTED COEFFICIENTS SCHEDULE	PAGES
Stability Characteristics - Orbiter in Presence of External Tank, 01/T3	MACH	C, D	194-196
Stability Characteristics - Orbiter in Presence of External Tank, 2 SRB, 01/T3S1	X-SRB, MACH	C, D	197-206
Stability Characteristics - Retro Removed From External Tank Nose, 01T5S1	MACH	C, D	207-209
Stability Characteristics - Orbiter Alone, 01	ALPHA, MACH	C, D	210-216
Stability Characteristics - External Tank in Presence of Orbiter, T3/01	MACH	C, D	217-219
Stability Characteristics - External Tank 2 SRB in Presence of Orbiter, T3S1/01	X-SRB, MACH	C, D	220-229
Stability Characteristics - External Tank in Presence of Orbiter, 2SRB T3/S1/01	X-SRB, MACH	C, D	230-239
Stability Characteristics - T3 With One SRB Attached, in Presence of SRB and 01	MACH	C, D	240-242

INDEX OF DATA FIGURES - Continued.

TITLE	CONDITIONS VARYING	PLOTTED COEFFICIENTS SCHEDULE	PAGES
Stability Characteristics - T3 With Left SRB Attached, in Presence of Right SRB, T3S1/2/S1/2	MACH	C, D	243-245
Stability Characteristics - T3 in Presence of SRB, T3/S1/2	MACH	C, D	246-248
Stability Characteristics - T3 With Two SRB (S1) Attached, T3S1	MACH	C, D	249-251
Stability Characteristics - One SRB Alone, S1/2	MACH	C, D	252-255
Stability Characteristics - External Tank Alone	MACH	C, D	256-258
Stability Characteristics - Effects of Body Build-up on Orbiter	Configuration, ORBINC, X-SRB MACH	A	259-360
Stability Characteristics - Effects of Body Build-up on External Tank	Configuration ORBINC, X-SRB MACH	A	361-456

INDEX OF DATA FIGURES - Continued.

TITLE	CONDITIONS VARYING	PLOTTED COEFFICIENTS SCHEDULE	PAGES
Stability Characteristics - Effects of Body Build-up on Orbiter	X-SRB, Configuration, MACH	C	457-473
Stability Characteristics - Effect of Body Build-up on External Tank	X-SRB, Configuration, MACH	C	474-496
Interference Free Longitudinal Data in Pitch	Configuration, MACH	A	497-512
Interference Coefficients Longitudinal Data in Pitch	Configuration, MACH	A	513-526
Interference Free Lateral - Directional Data in Pitch	Configuration, MACH	E	527-534
Interference Coefficients Lateral-Directional Data in Pitch	Configuration, MACH	E	535-541
Interference Free Lateral-Directional and Longitudinal Data in Yaw	Configuration, MACH	F, C	542-565
Interference Coefficients Lateral-Directional and Longitudinal Data in Yaw	Configuration, MACH	F, C	566-586

INDEX OF DATA FIGURES - Concluded.

TITLE	CONDITIONS VARYING	PLOTTED COEFFICIENTS SCHEDULE	PAGES
Interference of One SRB on External Tank	MACH	F,C	587-593

PLOTTED COEFFICIENTS SCHEDULE

A	CN, CLM vs ALPHA; CN vs CLM; CAB, CAF vs ALPHA
B	D(CN), D(CLM), CNAFO, CAFAFO, CABAFO, CLMAFO vs MACH
C	CY, CYN, CBL vs BETA
D	D(CY), D(CYN), D(CBL) vs MACH
E	CY, CYN, CBL vs ALPHA
F	CN, CLM, CAB, CAF vs BETA

NOMENCLATURE
General

SYMBOL	SADSAC SYMBOL	DEFINITION
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_l - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m^2, psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2, psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3, $slugs/ft^3$
		Reference & C.G. Definitions
A_b		base area; m^2, ft^2
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
ℓ_{REF} $\bar{c}$	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m^2, ft^2
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

l	local
s	static conditions
t	total conditions
∞	free stream

NOMENCLATURE (Continued)

Body-Axis System

SYMBOL	SADSAC SYMBOL	DEFINITION
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_ℓ	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$
		Stability-Axis System
C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_ℓ	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$
L/D	L/D	lift-to-drag ratio; C_L/C_D

ADDITIONS TO NOMENCLATURE

FOR MSFC TEST 545

SYMBOL	SADSAC SYMBOL	DEFINITION
δe_L	ELVN-L	Full left elevon, surface deflection angle, positive deflection, trailing edge down; degrees.
δe_R	ELVN-R	Full right elevon, surface deflection angle, positive deflection, trailing edge down; degrees.
δe	ELEVTR	Full elevator only, surface deflection angle, positive deflection, trailing edge down; degrees.
δe_{LO}		Left outboard elevon only, surface deflection angle, positive deflection, trailing edge down; degrees.
δe_{RO}		Right outboard elevon only, surface deflection angle, positive deflection, trailing edge down; degrees.
δe_O	OBDELV	Outboard elevator only, surface deflection angle, positive deflection, trailing edge down; degrees.
δe_I	IBDELV	Inboard elevator only, surface deflection angle, positive deflection, trailing edge down; degrees.
δ_R	RUDDER	Rudder, surface deflection angle, positive deflection, trailing edge to the left; degrees.
δ_{RF}	RUDFLR	Rudder flare, split rudder deflection angle, positive deflection, trailing edges outward; degrees.
δa	AILRON	Aileron, full or outboard total aileron deflection angle, degrees, (left aileron-right aileron)/2.
δa_O	OBDAIL	Outboard aileron, outboard total aileron deflection angle, degrees, (left aileron-right aileron)/2.

ADDITIONS TO NOMENCLATURE (Continued)

SYMBOL	SADSAC SYMBOL	DEFINITION
δa_I	IBDAIL	Inboard aileron, inboard total aileron deflection angle, degrees, (left aileron-right aileron)/2.
CN_α	D(CN)	Normal force coefficient gradient, per degree.
CLM_α	D(CLM)	Pitching moment coefficient gradient, per degree.
$CN_{\alpha=0}$	CNAFO	Normal force coefficient at alpha = 0 degree.
$CAF_{\alpha=0}$	CAFAFO	Forebody axial force coefficient at alpha = 0 degree.
$CAB_{\alpha=0}$	CABAFO	Base axial force coefficient at alpha = 0 degree.
$CLM_{\alpha=0}$	CLMAFO	Pitching moment coefficient at alpha = 0 degree.
C_{y_β}	D(CY)	Derivative of side force coefficient with respect to beta (beta = $\pm 5^\circ$); per degree.
C_{n_β}	D(CYN)	Derivative of yawing moment coefficient with respect to beta (beta = $\pm 5^\circ$); per degree, body axis system.
C_{ℓ_β}	D(CBL)	Derivative of rolling moment coefficient with respect to beta (beta = $\pm 5^\circ$); per degree, body axis system.
i_o	ORBINC	Orbiter incidence angle.
Z	DELTAZ	Separation distance between orbiter and tank.
X_{SRB}	X-SRB	Longitudinal position of SRB in relation to the external tank.

SUBSCRIPTS

b	base
o	orbiter
$s_{1/2}$	one solid rocket booster (SRB)
E	external tank (ET)

SYMBOL

BMC	balance moment center

MODEL DESCRIPTION AND TUNNEL INSTALLATION

Figures 2 through 4 represent the geometry of the ascent configuration composed of orbiter, SRB, and external tank configurations. Other pertinent dimensional information for each model component is given in Table IV. The external tank, SRB bodies, and nose cones are made of aluminum while the SRB nozzles are made of brass. All other parts are constructed of stainless steel.

In order to determine interference loads between individual launch components several model-tunnel mounting methods were necessary and are delineated in Table I. A description of the mounting methods is given below.

(MULTI STING SYSTEM)

Utilizing the MSFC Parallel Staging Mounting System (see Figure 5), the orbiter was mounted on the upper sting of the system while the external tank was mounted on the lower sting. The SRB's were mounted either on the external tank (termed metric configuration) or on individual stings (termed non-metric configuration). Figures 10 and 11 show these mounting arrangements with Figure 10 depicting the left SRB in the metric position and Figure 11 showing the right SRB in the non-metric position.

(LAUNCH CONFIGURATION SINGLE STING)

The launch configuration was tested on a single sting mounted to the tunnel sector with the balance located in the external tank. The launch configuration dimensions and general layout are shown in Figure 2.

(ORBITER ALONE)

The orbiter alone was tested on the upper sting of the MSFC Parallel Staging Mounting System. The orbiter configuration is shown in Figure 3.

(SRB ALONE)

The SRB alone was tested on a single sting mounted to the tunnel sector (see Figure 12). The SRB configuration general layout is depicted in Figure 4.

CONFIGURATIONS INVESTIGATED

Test results reported herein were obtained on the following model configurations (see Table 1).

1. A 0.004-scale modified NR ATP Launch Configuration mounted on the MSFC Parallel Staging Mounting System with the orbiter and external tank on separate stings and balances; additional stings (not instrumented) were utilized when the SRB's were not attached (non-metric) to the external tank. Data were recorded by the separate balances for the following configurations:

ORBITER BALANCE

Configuration	Description
(01)/(T3)	Orbiter in presence of External Tank.
(01)/(T3)(S1)	Orbiter in presence of External Tank with both SRB's attached.
(01)/(T3)/(S1)	Orbiter in presence of External Tank with both SRB's present but not attached to External Tank.

(O1)/(T3)(S 1/2)/(S 1/2)	Orbiter in presence of external tank with one SRB attached and one present but not attached to the external tank.

EXTERNAL TANK BALANCE

Configuration	Description
(T3)/(O1)	External tank in presence of orbiter.
(T3)(S1)/(O1)	External tank and both SRB's attached in presence of orbiter.
(T3)/(S1)/(O1)	External tank in presence of unattached SRB's and orbiter.
(T3)(S 1/2)/(S 1/2)/(O1)	External tank with one SRB attached in presence of the second SRB and orbiter.
(T3)(S 1/2)/(S 1/2)	External tank with one SRB attached in presence of second SRB.
(T3)/(S 1/2)	External tank in presence of one SRB.

2. The following 0.004-scale configurations were mounted on a single sting-balance instrumentation arrangement:

(O1)	Orbiter configuration
(O1)(T5)(S1)	Launch configuration
(T3)	External tank
(T3)(S1)	External tank with both SRB's attached.

3. A single 0.005128-scale ATP solid rocket booster (S 1/2) was also mounted on a single sting-balance instrumentation arrangement.

Specific dimensions for the configurations, described below, can be found in the dimensional data (Table IV):

SYMBOL	DESCRIPTION
O_1	NR ATP baseline orbiter less ASRM (abort solid rocket motors); (B1C1D1F1M1) (W1E1) (V1K1R1)
T_3	318-inch diameter external tank with ogive nose cone and retro-rocket package.
T_5	318-inch diameter external tank with ogive nose cone. Retro-rocket package removed and replaced with 26.5-inch radius nose.
S_1	Two 156-inch diameter SRBs (solid-rocket boosters) with 17° nose cone and hold down arms (ATP baseline) (0.004 scale).
S 1/2	One 156-inch diameter SRB (solid-rocket booster) with 17°30' nose cone with hold down arms (ATP configuration (N1B1E1) (0.005128 scale).

The following names are used to define orbiter control deflection for this investigation:

CONTROL SURFACES						NOMENCLATURE			
RUDDER FLARE	RUDDER	ELEVONS				ELEVTR δ_e	AILRON δ_a	RUDDER δ_r	RUDDER FLARE, δ_{RF}
		LEFT		RIGHT					
		INBOARD	OUTBOARD	INBOARD	OUTBOARD				
10	0	0	0	0	0	0	0	0	10
10	0	10	10	10	10	10	0	0	10
10	0	-20	-20	-20	-20	-20	0	0	10

AILRON δ_a Inboard and outboard elevons deflected together for roll control

ELEVTR δ_e Inboard and outboard elevons deflected together for pitch control

RUDDER δ_r Normal rudder control

RUDFLR δ_{RF} Rudder flare

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14" x 14" Trisonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.85 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50, and the supersonic section permits testing at Mach 2.74 through 5.85. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and perforated walls. Mach numbers of 1.44, 1.93 and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks are tilted and translated automatically to produce any desired Mach number in .25 increments.

Air is supplied to a 6000 cubic foot storage tank at approximately -40°F dew point and 500 psi. The compressor is a three-stage reciprocating unit driven by a 1500 hp motor.

The tunnel flow is established and controlled with a servo actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 180°F. The air then passes through the test section which contains the nozzle blocks and test region.

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle of attack range of 20° (±10°). Sting offsets are available for obtaining various maximum angles of attack up to 90°.

TEST PROCEDURE

(MULTI STING DATA)

In order to obtain data with nominal separation distances and incidence angles, two different orbiter to tank separation distances and three orbiter to tank incidence angles were tested. The separation distances were .12 and .24 inches. The incidence angles tested were -1.2, 0, and 1.5 degrees. For beta sweeps, a separation distance of .12 inches and an orbiter incidence angle of 0 degree was used.

The orbiter and tank were electrically isolated from the stings by use of insulative tape and non-conducting balance keys. These bodies were wired to a fouling circuit to detect fouling for any combination of orbiter, tank or SRB tested. No control deflections were used for this portion of the test.

(LAUNCH CONFIGURATION SINGLE STING DATA)

The orbiter and SRB's were attached to the external tank which was mounted to balance #232 and a straight sting mounted to the tunnel sector system. No control deflections were used for this portion of test.

(ORBITER ALONE DATA)

The orbiter was mounted on MSFC balance #231 on the upper sting of the MSFC Parallel Staging Mounting System. The lower sting of this system was removed for this series of runs. To obtain the sideslip series at -5 degrees angle of attack, the orbiter was preset to -5 degrees angle of attack with the relative pitch control assembly (see Figure 5) and then the entire system was rotated 90 degrees so that the tunnel sector could

be utilized to obtain sideslip angle. Elevon surfaces were deflected to obtain control effectiveness data.

(SRB ALONE DATA)

The SRB model was mounted on MSFC balance #231 and a straight sting mounted to tunnel sector. The test was conducted with the model in the zero roll position only (same position as if they were mounted on external tank).

DATA REDUCTION

All model forces and moments are resolved in the body axis system and are presented in the form of non-dimensional coefficients. This investigation had two model sizes, therefore, all reference dimensions are given in full scale values as well as in model values. See individual dimensional sheets for detail model dimensions (Table IV).

All moments were referenced about model station 4.820 on the external tank (ET) which is equivalent to orbiter fuselage station 0.0 (see Figures 2 and 8).

Reference dimensions for the configurations are:

	Full Scale	Scale Model
Reference Area (SREF) (Orbiter Theoretical Wing Area)		
Orbiter alone	3220 ft^2	7.419 in^2
Integrated vehicle	|	|
External tank alone	|	7.419 in
One SRB alone	3220 ft^2	*12.1931 in^2

*0.005128 scale model

Reference Length (LREF) and Reference Span (BREF)		
(Orbiter Length)		
Orbiter alone	1328.0 in	5.312 in
Integrated vehicle	|	|
External tank alone	|	5.312 in
One SRB alone	1328.0 in	*6.8100 in
Balance Location (BMC)		
Orbiter alone (aft of orbiter model nose)		3.719 in
Integrated vehicle (fwd of model base)		3.113 in
External tank alone (fwd of model base)		3.113 in
One SRB alone (fwd of base of nozzle)		*4.8583 in
Moment Reference Point		
Orbiter Alone		
XMRP (ET ℄ at orb nose)		
(3.719 inches fwd BMC)	STA 0.0	STA 0.0
YMRP (ET ℄ at orb nose)	|	|
(on orbiter & ET ℄)	|	|
ZMRP (ET ℄ at orb nose)	|	|
(1.307 inches below orbiter ℄)	STA 0.0	STA 0.0
Integrated Vehicle		
XMRP (ET ℄ at orb nose)		
(1.707 inches fwd ET BMC)	STA 0.0	STA 0.0
YMRP (ET ℄ at orb nose)	|	|
(on ET ℄)	|	|
ZMRP (ET ℄ at orb nose)	|	|
(on ET ℄)	STA 0.0	STA 0.0
External Tank Alone		
XMRP (ET ℄ at orb nose)		
(1.707 inches fwd ET BMC)	STA 0.0	STA 0.0
YMRP (ET ℄ at orb nose)	|	|
(on ET ℄)	|	|
ZMRP (ET ℄ at orb nose)	|	|
(on ET ℄)	STA 0.0	STA 0.0
*One SRB Alone		
XMRP (ET ℄ at orb nose)		
(1326.7 inches fwd of SRB base)	STA 0.0	STA 0.0
YMRP (ET ℄ at orb nose)	|	|
(235.9 inches laterally (right) of SRB ℄)	|	|
ZMRP (ET ℄ at orb nose)	|	|
(48.1 inches down from SRB ℄)	STA 0.0	STA 0.0

* 0.005128 scale model

The following base areas apply to noted configuration:

Configuration	Ab_o Full Scale	Ab_o Model Scale	Ab_s Full Scale	Ab_s Model Scale	Ab_E Full Scale	Ab_E Model Scale
(O1)/(T3)	380 ft^2	0.878 in^2	———	———	552 ft^2	1.271 in^2
(T3)/(O1)			———	———		
(O1)/(T3)(S1)			265.4 ft^2	0.612 in^2		
(T3)(S1)/(O1)			265.4 ft^2	0.612 in^2		
(O1)/(T3)/(S1)			———	———		
(T3)/(S1)/(O1)			———	———		
(O1)/(T3)(S1/2)/(S1/2)			132.7 ft^2	0.306 in^2		
(T3)(S1/2)/(S1/2)/(O1)			132.7 ft^2	0.306 in^2		
(O1)(T5)(S1)	380 ft^2	0.878 in^2	265.4 ft^2	0.612 in^2		
(T3)(S1/2)/(S1/2)	———	———	132.7 ft^2	0.306 in^2		
(T3)/(S1/2)	———	———	———	———		
(T3)(S1)	———	———	265.4 ft^2	0.612 in^2	552 ft^2	1.271 in^2
(S1/2)	———	———	132.7 ft^2	0.503 in^2*	———	———
(T3)	———	———	———	———	552 ft^2	1.271 in^2
(O1)	380 ft^2	0.878 in^2	———	———	———	———

*0.005128 scale model

Base axial force coefficients were calculated using the following equations:

MULTI STING LAUNCH

Orbiter: $$CAB = - CPB_o \frac{Ab_o}{S_{ref}}$$

Tank & SRB: $$CAB = - CPB_E \frac{Ab_E}{S_{ref}} - CPB_s \frac{Ab_s}{S_{ref}}$$

Where:

$$CPB_o = (Pb_o - P_\infty)/q$$

$$CPB_s = (Pb_s - P_\infty)/q$$

$$CPB_E = (Pb_{E(avg)} - P_\infty)/q$$

SINGLE STING LAUNCH CONFIGURATION

Orbiter: $$CAB_o = - CPB_o \frac{Ab_o}{S_{ref}}$$

Tank: $$CAB_E = - CPB_E \frac{Ab_E}{S_{ref}}$$

SRB: $$CAB_s = - CPB_s \frac{Ab_s}{S_{ref}}$$

Where:

$$CPB_o = (Pb_o - P_\infty)/q$$

$$CPB_E = (Pb_{E(avg)} - P_\infty)/q$$

$$CPB_s = (Pb_s - P_\infty)/q$$

Therefore: $$CAB = CAB_o + CAB_E + CAB_s$$

ORBITER ALONE:

$$CAB = - CPB_o \frac{Ab_o}{S_{ref}}$$

Where:

$$CPB_o = (Pb_o - P_\infty)/q$$

SRB ALONE:

$$CAB_1 = - CPB_1 \frac{Ab_{s1}}{S_{ref}}$$

$$CAB_2 = - CPB_2 \frac{AB_{s2}}{S_{ref}}$$

Where: $CPB_1 = (P_1 - P_\infty)/q$

$$CPB_2 = (P_2 - P_\infty)/q$$

and:

$$Ab_{s1} = 1/2 \text{ of base area } (\frac{0.503}{2} \text{ in}^2)$$

$$Ab_{s2} = 1/2 \text{ of base area } (\frac{0.503}{2} \text{ in}^2)$$

Therefore: $CAB = CAB_1 + CAB_2$

REFERENCES

1. Andrews, C. Donald, A Space Shuttle Parallel Staging Feasibility Study in the NASA/MSFC 14 x 14-Inch Trisonic Tunnel, LMSC-HREC D225158 TM 54/20-319, July, 1971.

TABLE I
CONFIGURATION AND NOMENCLATURE DESCRIPTIONS

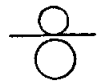
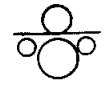
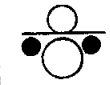
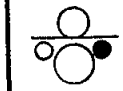
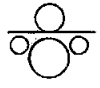
CONFIGURATION NOMENCLATURE		PRIMARY BALANCE	LEFT SRB		RIGHT SRB		SECONDARY BALANCE
			METRIC	NON-METRIC	METRIC	NON-METRIC	
	01/T3	Orbiter (01)	-	-	-	-	External Tank (T3)
	T3/01	External Tank (T3)	-	-	-	-	Orbiter (01)
	01/T3S1	Orbiter (01)	X		X		External Tank (T3)
	T3S1/01	External Tank (T3)	X		X		Orbiter (01)
	01/T3/S1	Orbiter (01)		X		X	External Tank (T3)
	T3/S1/01	External Tank (T3)		X		X	Orbiter (01)
	01/T3S1/2/S1/2	Orbiter (01)	X			X	External Tank (T3)
	T3S1/2/S1/2/01	External Tank (T3)	X			X	Orbiter (01)

TABLE I. (Continued)

CONFIGURATION NOMENCLATURE		PRIMARY BALANCE	LEFT SRB		RIGHT SRB		SECONDARY BALANCE
			METRIC	NON-METRIC	METRIC	NON-METRIC	
	T5S101	External Tank (T5)	X		X		----
	T3S1/2/S1/2	External Tank (T3)	X			X	----
	T3/S1/2	External Tank (T3)	--	--		X	----
	T3S1	External Tank (T3)	X		X		----
	S1/2	Solid Rocket Booster (S1/2)	--	--	--	--	----
	T3	External Tank (T3)	--	--	--	--	----
	01	Orbiter (01)	--	--	--	--	----

TEST : MSFC TWT 545

TABLE II

TEST CONDITIONS

DATE : OCT/NOV, 1972

MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
.60	4.9×10^6/ft.	4.33	100°
.80	5.9×10^6/ft.	6.49	100°
.90	6.3×10^6/ft.	7.38	100°
1.00	6.5×10^6/ft.	8.14	100°
1.20	6.7×10^6/ft.	9.15	100°
1.46	6.4×10^6/ft.	9.47	100°
1.96	6.8×10^6/ft.	9.90	100°
2.99	5.4×10^6/ft.	6.91	140°
4.96	4.9×10^6/ft.	3.07	140°

BALANCE UTILIZED: MSFC #231 and #232

	CAPACITY: 231	CAPACITY: 232	ACCURACY: 231	ACCURACY: 232	COEFFICIENT TOLERANCE: q=10 psi 231	COEFFICIENT TOLERANCE: q=10 psi 232
NF	122	300 (lb)	.61	1.5 (lb)	.0082	.0202
SF	52	143 (lb)	.26	.72 (lb)	.0035	.0097
AF	20	50 (lb)	.10	.25 (lb)	.0013	.0034
PM	122	400 (in-lb)	.61	2.0 (in-lb)	.0015	.0051
RM	53	192 (in-lb)	.27	.96 (in-lb)	.0007	.0024
YM	30	100 (in-lb)	.15	.50 (in-lb)	.0004	.0013

COMMENTS:

TABLE III.

TEST MSFC TWT 545 ATA SET COLLATION SHEET

MULTI STING DATA:

☐ PRETEST

☒ POSTTEST

ORBITER IN PRESENCE OF EXTERNAL TANK AND SOLID ROCKET BOOSTER

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES z_o	PARAMETERS/VALUES Z	PARAMETERS/VALUES x_{SRB}	PARAMETERS/VALUES δ_r	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{RF}	δ_{eL}	δ_{eR}	0.60	0.80	0.90	1.00	1.20	1.46	1.96	2.99	4.96
R72001	(01)/(T3) CONFIG 1	A	0	0	.12	—	0		10	0	0	1136		1002	1003	1001/1	1166	1221		1263
02				-1.2	.12	—						1035		1034	1032	1037/1	1172	1220		1262
03				1.5	.12	—						1054		1055	1056	1057	1178	1217		1259
04				0	.24	—						1123		1122	1120	1121	1196	1222		1264
05				-1.2	.24	—						1098		1099	1100	1101	1190	1219		1261
06		↓	↓	1.5	.24	—						1079		1078	1077	1076	1184	1218		1260
07	↓	0	B	0	.12	—						2321		2322	2324	2323	2309	2302		2293
08	(01)/(T3)(S1) CONFIG 2	A	0	0	.12	0						1134	1135	1005/1	1007	1006	1164	1209	1267	1268
09				-1.2	12							1036	1037	1038	1039	1040	1173	1208	1270	1269
10				1.5	.12							1053	1052	1051	1050	1049	1176	1205	1275	1276
11				0	.24							1124	1125	1126	1128	1127	1197	1210	1266	1265
12				-1.2	.24							1097	1096	1095	1094	1093	1188	1207	1271	1272
13		↓	↓	1.5	.24							1080	1081	1082	1083	1084	1185	1206	1274	1273
14	↓	0	B	0	.12							2312	2313	2314	2316	2315	2310	2300	2295	2294
15	(01)/(T3)/(S1) CONFIG 3	A	0	0	.12							1018	1019	1020	1021	1022	1167	1224	1247	1248
16				-1.2	.12							1027	1026	1025	1023	1024	1170	1225	1250	1249
17				1.5	.12							1062	1061	1060	1059	1058	1179	1228	1242	1241
18				0	.24							1115	1116	1117	1119	1118	1194	1223	1246	1245
19				-1.2	.24							1106	1105	1104	1102	1103	1191	1226	1251	1252
20		↓	↓	1.5	.24	↓	↓		↓	↓	↓	1071	1072	1073	1074	1075	1192	1227	1243	1244

29

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	ICLM	ICY	ICYN	ICBL	CAF	CAB							7

COEFFICIENTS: → IDPVAR(1) | IDPVAR(2) | NDV

α or β SCHEDULES

α RANGE: A = -5 TO 10° (Δα = 2°)

α RANGE: B = -6 TO 6° (Δβ = 2°)

MSFC - Form 263-2 (February 1972)

TABLE III. (Continued)

TEST MSFC TWT 545 DATA SET COLLATION SHEET

☐ PRETEST

☐ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES c_0	Z	X_{SPB}	δ_r	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{RF}	δ_{EL}	δ_{ER}	0.60	0.80	0.90	1.00	1.20	1.46	1.96	2.99	4.96
R72021	(01)/(T3)/(S1) CONFIG 3	0	B	0	.12	0	0		10	0	0	2329	2330	2331	2333	2332	2307	2304	2290	2289
22	(01)/(T3)(S1) CONFIG 2	A	0	0	.12	-.624						1133		1011/1	1013	1012	1165	1200		1279
23				-1.2	.12							1044		1043	1041	1042	1174	1201		1281
24				1.5	.12							1045		1046	1047	1048	1175	1204		1277
25				0	.24							1132		1131	1129	1130	1198	1199		1280
26				-1.2	.24							1089		1090	1091	1092	1187	1202		1282
27				1.5	.24							1088		1087	1086	1085	1186	1203		1278
28		0	B	0	.12							2320		2319	2317	2318	2311	2301		2296
29	(01)/(T3)/(S1) CONFIG 3	A	0	0	.12							1017		1016	1014	1015	1168	1233		1236
30				-1.2	.12							1028		1029	1030	1031	1169	1232		1237
31				1.5	.12							1063		1064	1065	1066	1180	1229		1240
32				0	.24							1114		1113	1111	1112	1193	1234		1235
33				-1.2	.24							1107		1108	1110	1109	1192	1231		1238
34				1.5	.24							1070		1069	1068	1067	1181	1230		1239
35		0	B	0	.12							2337		2336	2334	2335	2306	2305		2291
36	(01)/(T3)(S½)/(S½) CONFIG 4	A	0	0	.12	0						1137		1138	1140	1139	1163	1212		1255
37				-1.2	.12							1144		1143	1141	1142	1171	1218		1254
38				1.5	.12							1145		1146	1148	1147	1177	1216		1258
39				0	.24							1160		1159	1157	1158	1195	1211		1256
40				-1.2	.24							1153		1154	1156	1155	1169	1214		1253

1 7 13 19 25 31 37 43 49 55 61 67 75 76

30

COEFFICIENTS: → IDPVAR(1) | IDPVAR(2) | NDV

α or β SCHEDULES

MSFC - Form 263-2 (February 1972)

TABLE III. (Continued)

TEST MSFC TWT 545 DATA SET COLLATION SHEET

☐ PRETEST

☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES i_0	PARAMETERS/VALUES Z	PARAMETERS/VALUES X_{SRB}	PARAMETERS/VALUES δ_T	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{RF}	$\delta_{e\,L}$	$\delta_{e\,R}$	0.60	0.80	0.90	1.00	1.20	1.46	1.96	2.99	4.96
R72041	(01)/(T3)(5½)/(3½) Config 4	A	0	1.5	.24	0	0		10	0	0	1152		1151	1149	1150	1183	1215		1257
042	↓	0	B	0	.12	0	0		10	0	0	2326		2327	2325	2326	2308	2303		2292

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS: → IDPVAR(1) | IDPVAR(2) | NDV

α or β SCHEDULES

MSFC - Form 263-2 (February 1972)

TABLE III. (Continued)

TEST MSFC TWT 545 DATA SET COLLATION SHEET

MULTI STING DATA:

EXTERNAL TANK (WITH AND WITHOUT SRB'S ATTACHED) IN PRESENCE OF ORBITER

☐ PRETEST

☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES i_0	z	x_{SRB}	δ_r	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{RF}	δ_{eL}	δ_{eR}	0.60	0.80	0.90	1.00	1.20	1.46	1.96	2.99	4.96
R72 101	(T3)/(01) CONFIG 11	A	O	0	.12	—	0		10	0	0	2136		2002	2003	2001/1	2166	2221		2263
102				-1.2	.12	—						2035		2034	2032	2033/1	2172	2220		2262
103				1.5	.12	—						2054		2055	2056	2057	2178	2217		2259
104				0	.24	—						2123		2122	2120	2121	2196	2222		2264
105				-1.2	.24	—						2098		2099	2100	2101	2190	2219		2261
106				1.5	.24	—						2079		2078	2077	2076	2184	2218		2260
107		O	B	0	.12	—						1321		1322	1324	1323	1309	1302		1293
108	(T3)(S1)/(01) CONFIG 12	A	O	0	.12	O						2134	2135	2005/1	2007	2006	2164	2209	2267	2268
109				-1.2	.12							2036	2037	2038	2039	2040	2173	2208	2270	2269
110				1.5	.12							2053	2052	2051	2050	2049	2176	2205	2275	2276
111				0	.24							2124	2125	2126	2128	2127	2197	2210	2266	2265
112				-1.2	.24							2097	2096	2095	2094	2093	2188	2207	2271	2272
113				1.5	.24							2080	2081	2082	2083	2084	2185	2206	2274	2273
114		O	B	0	.12							1312	1313	1314	1316	1315	1310	1300	1295	1294
115	(T3)/(S1)/(01) CONFIG 13	A	O	0	.12							2018	2019	2020	2021	2022	2167	2224	2247	2248
116				-1.2	.12							2027	2026	2025	2023	2024	2170	2225	2250	2249
117				1.5	.12							2062	2061	2060	2059	2058	2179	2228	2242	2241
118				0	.24							2115	2116	2117	2119	2118	2194	2223	2246	2245
119				-1.2	.24							2106	2105	2104	2102	2103	2191	2226	2251	2252
120				1.5	.24							2071	2072	2073	2074	2075	2182	2227	2243	2244

1	7	13	19	25	31	37	43	49	55	61	67	75 76
CN	CLM	CY	CYN	CBL	CAF	CAB						7

COEFFICIENTS: → IDPVAR(1) | IDPVAR(2) | NDV

α or β SCHEDULES

α RANGE: A = -5 TO 10° (Δα = 2°)

β RANGE: B = -6 TO 6° (Δβ = 2°)

MSFC - Form 263-2 (February 1972)

TABLE III. (Continued)

TEST MSFC TWT 545 DATA SET COLLATION SHEET

☐ PRETEST

☐ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES i_o	PARAMETERS/VALUES Z	PARAMETERS/VALUES X_{SRB}	PARAMETERS/VALUES δ_r	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{RF}	δ_{eL}	δ_{eR}	0.60	0.80	0.90	1.00	1.20	1.46	1.96	2.99	4.96
R72121	(T3)/(S1)/(01) CONFIG 13	0	B	0	.12	0	0		10	0	0	1329	1330	1331	1333	1332	1307	1304	1290	1289
122	(T3)(S1)/(01) CONFIG 12	A	0	0	.12	-.624						2133		2011/1	2013	2012	2165	2200		2279
123				-1.2	.12							2044		2043	2041	2042	2174	2201		2281
124				1.5	.12							2045		2046	2047	2048	2175	2204		2277
125				0	.24							2132		2131	2129	2130	2198	2199		2280
126				-1.2	.24							2089		2090	2091	2092	2187	2202		2282
127		↓	↓	1.5	.24							2088		2087	2086	2085	2186	2203		2278
128	↓	0	B	0	.12							1320		1319	1317	1318	1311	1301		1296
129	(T3)/(S1)/(01) CONFIG 13	A	0	0	.12							2017		2016	2014	2015	2168	2233		2236
130				-1.2	.12							2028		2029	2030	2031	2169	2232		2237
131				1.5	.12							2063		2064	2065	2066	2180	2229		2240
132				0	.24							2114		2113	2111	2112	2193	2234		2235
133				-1.2	.24							2107		2108	2110	2109	2192	2231		2238
134		↓	↓	1.5	.24							2070		2069	2068	2067	2181	2230		2239
135	↓	0	B	0	.12	↓						1337		1336	1334	1335	1306	1305		1291
136	(T3)(S1½)/(S1½)/(01) CONFIG 14	A	0	0	.12	0						2137		2138	2140	2139	2163	2212		2255
137				-1.2	.12							2144		2143	2141	2142	2171	2213		2254
138				1.5	.12							2145		2146	2148	2147	2177	2216		2258
139				0	.24							2160		2159	2157	2158	2195	2211		2256
↓ 140	↓	↓	↓	-1.2	.24	↓	↓		↓	↓	↓	2153		2154	2156	2155	2199	2214		2253

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS: → IDPVAR(1) | IDPVAR(2) | NDV

α or β SCHEDULES

MSFC - Form 263-2 (February 1972)

TABLE III. (Continued)

TEST MSFC TW7545 DATA SET COLLATION SHEET

☐ PRETEST

☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES i_0	PARAMETERS/VALUES z	PARAMETERS/VALUES x_{SRB}	PARAMETERS/VALUES δ_r	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{RF}	δ_{eL}	δ_{eR}	0.60	0.80	0.90	1.00	1.20	1.46	1.96	2.99	4.96
R72 141	(T3)(S½)/(S½)/(61) CONF.6 14	A	0	1.5	.24	0	0		10	0	0	2152		2151	2149	2150	2183	2215		2257
142	↓	0	B	0	.12	0	0		10	0	0	1328		1327	1325	1326	1308	1303		1292
143	(T3)(S½)/(S½) CONF.6 16	A	0	–	–	0	–		–	–	–	1344		1345	1347	1346	1358	1357		1286/1
144	↓	0	B	–	–	0	–		–	–	–	1351		1350	1348	1349	1357	1360		1278
145	(T3)/(S½) CONF.6 17	0	B	–	–	0	–		–	–	–	1352		1353	1355	1354	1356	1361		1288

1 7 13 19 25 31 37 43 49 55 61 67 75 76

34

IDPVAR(1) | IDPVAR(2) | NDV

COEFFICIENTS: _____

α or β SCHEDULES _____

MSFC - Form 263-2 (February 1972)

TABLE III. (Continued)

TEST MSFC TWT 545 DATA SET COLLATION SHEET

SINGLE STING DATA:

SRB ALONE

☐ PRETEST

☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES i0	PARAMETERS/VALUES z	PARAMETERS/VALUES x_{SRB}	PARAMETERS/VALUES δ_r	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{RF}	δ_{gL}	δ_{eR}	0.60	0.80	0.90	1.00	1.20	1.46	1.96	2.99	4.96
F72201	(S1/2) CONFIG 12	A	O	—	—	—	—		—	—	—	3601		3602	3603	3604	3610	3611		3614
202	↓	O	B	—	—	—	—		—	—	—	3608		3607	3606	3605	3609	[illegible]		3613

1 7 13 19 25 31 37 43 49 55 61 67 75 76

CN CLM CY CYN CBL CAF CAB

COEFFICIENTS: → IDPVAR(1) | IDPVAR(2) | NDV

α or β SCHEDULES

α = -10 TO 10 Δα = 2

β = -4 TO 10

MSFC - Form 263-2 (February 1972)

TABLE III. (Concluded)

TEST MSFC TWT 545 DATA SET COLLATION SHEET

SINGLE SLING DATA:

☐ PRETEST
☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES i_O	PARAMETERS/VALUES $\bar{z}$	PARAMETERS/VALUES x_{SRB}	PARAMETERS/VALUES δ_T	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{RF}	δ_{SL}	δ_{SR}	0.60	0.80	0.90	1.00	1.20	1.46	1.96	2.99	4.96
R72301	(TE-51)(01) CONFIG 5	A	0	0	.12	0	0		10	0	0	1505		1506	1508	1507	1523	1530	1533	1534
302	↓	0	B	0	.12	0	0		10	0	0	1504		1503	1501	1502	1524	1527	1536	1535
501	(01) CONFIG 25	A	0	—	—	—	0		10	0	0	2724		2723		2722		2713	2702	2701
502		A	0	—	—	—	0		10	10	10	2719		2720		2721		2714	2710	2709
503		A	0	—	—				10	-20	-20	2718		2717		2716		2715	2707	2708
504		0	B	—	—	—	0		10	0	0	2720		2726		2727		2712	2703	2704
505	↓	-5	B	—	—	—	0		10	0	0	2730		2729		2728		2711	2706	2705
601	(T3) CONFIG 20	A	0	—	—	—	—		—	—	—	1940		1941	1942	1943	1984	1948		1901
602	↓	0	B	—	—	—	—		—	—	—	1840		1841	1842	1843	1884	1948		1801
701	(T3)(51) CONFIG 18	A	0	—	—	0	—		—	—	—	1924		1925	1926	1927	1980	1952		1905
801	↓	0	B	—	—	0	—		—	—	—	1931		1930	1929	1928	1981	1951		1904

1 7 13 19 25 31 37 43 49 55 61 67 75 76

CN CLM CY CYN CBL CAF CAB 7

COEFFICIENTS: → IDPVAR(1) | IDPVAR(2) | NDV

α or β SCHEDULES
α RANGE: A: -10 TO 10°
β RANGE: B: -10° TO 10°

MSFC - Form 263-2 (February 1972)

TABLE IV.

DIMENSIONAL DATA

NR ATP BASELINE ORBITER CONFIGURATION

SYMBOL	DESCRIPTION
(BICIDIFIMI)	Body Alone
BI	Orbiter body, with housing along top centerline
CI	Canopy
DI	Manipulator fairing
FI	Body flap
MI	OMS pods
(BICIDIFIMI)(WIEI)	Body With Wing
WI	Wing
EI	Elevon
(BICIDIFIMI)(WIEI) (VIKIRI)	Body With Wing and Tail
VI	Vertical tail
KI	Air scoop at base of vertical fin
RI	Rudder

TABLE IV. (Continued)

NR ATP BASELINE ORBITER CONFIGURATION

MODEL COMPONENT: BODY - B1

GENERAL DESCRIPTION: BASIC DELTA WING FUSELAGE PER NAR LINES DRAWING VL70-000001

MODEL SCALE = .004

DRAWING NUMBER: VL000001

DIMENSIONS:	THEORETICAL		ACTUAL MEASURED
	FULL-SCALE	MODEL SCALE	MODEL SCALE
Length	1328.33	5.313	
Max. Width	237.96	0.952	
Max. Depth	238.00	0.952	
Fineness Ratio	5.527	5.527	
Area-FT^2			
Max. Cross-Sectional	326.0	.00522	
Planform			
Wetted			
Base			

TABLE IV. (Continued)

NR ATP BASELINE ORBITER CONFIGURATION

MODEL COMPONENT: BODY - CANOPY C1

GENERAL DESCRIPTION: CANOPY USED WITH BASIC DELTA WING FUSELAGE PER NAR LINES DWG VL70-000001

MODEL CALE = 0.004

DRAWING NUMBER: VL70-000001

DIMENSIONS:	THEORETICAL		ACTUAL MEASURED
	FULL-SCALE	MODEL SCALE	MODEL SCALE
STA FWD BULKHEAD, IN	340.00	1.3600	
STA. TRAILING EDGE, IN	560.00	2.240	
Max. Depth			
Fineness Ratio			
Area			
Max. Cross-Sectional			
Planform			
Wetted			
Base			

TABLE IV. (Continued)

NR ATP BASELINE ORBITER CONFIGURATION

MODEL COMPONENT: BODY - MANIPULATOR HOUSING - DI

GENERAL DESCRIPTION: _____

SCALE MODEL = 0.004

DRAWING NUMBER: VL70-000001

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length, IN	967.0	3.8680	
Max. Width, IN	53.32	0.2132	
Max. Depth, IN	20.00	0.080	
Fineness Ratio			
Area			
Max. Cross-Sectional			
Planform			
Wetted			
Base			

TABLE IV. (Continued)

NR ATP BASELINE ORBITER CONFIGURATION

MODEL COMPONENT: BODY - FLAP F1

GENERAL DESCRIPTION: FLAP LOCATED ON LOWER AFT PORTION OF BODY AND EXTENDING AFT OF BODY TRAILING EDGE

SCALE MODEL = 0.004

DRAWING NUMBER:

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length	83.33	0.333	
Fus. Sta. LE IN.	1528.33	6.113	
Fus. Sta. T.E. In.	1611.67	6.447	
Width (span) In.	229.33	0.917	
Area Ft.^{2}			
Max. Cross-Sectional	-	-	
Planform	132.72	0.0021	
Wetted			
Base			

TABLE IV. (Continued)

NR ATP BASELINE ORBITER
CONFIGURATION

MODEL COMPONENT: BODY - ORBITAL MANEUVERING SYSTEM POD-M1

GENERAL DESCRIPTION:

MODEL SCALE = 0.004

DRAWING NUMBER: VL - 000001

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length ~IN	290.67	1.1626	
Max. Width ~IN	67.33	0.2693	
Max. Depth ~IN	104.00	0.416	
Fineness Ratio	-	-	
Area			
Max. Cross-Sectional	-	-	
Planform	-	-	
Wetted	-	-	
Base	-	-	

TABLE IV. (Continued)
NR ATP BASELINE ORBITER
CONFIGURATION

MODEL COMPONENT: WING - WI

GENERAL DESCRIPTION: DELTA WING WITH -5° TWIST AND ROUNDED WING TIPS. WING BLENDS INTO BODY. FOLLOWS NAR LINES. VL70-00000[1]. EQUIV. SPAN IS 78.604 % OF THEORETICAL DELTA WING. MODEL SCALE = 0.004

DRAWING NUMBER: VL70-00000[1]

DIMENSIONS:	THEORETICAL		ACTUAL MEASURED
TOTAL DATA	FULL-SCALE	MODEL SCALE	MODEL SCALE
Area			
Planform	3221.92	.05155	
Wetted	-	-	
Span (equivalent)	1007.8	4.0312	
Aspect Ratio	2.144	2.144	
Rate of Taper	1.191	1.191	
Taper Ratio	0.219	0.219	
Dihedral Angle, degrees	3.500	3.500	
Incidence Angle, degrees	3.000	3.000	
Aerodynamic Twist, degrees	-5.000	-5.000	
Toe-In Angle	3.000	3.000	
Cant Angle	-2.000	-2.000	
Sweep Back Angles, degrees			
Leading Edge	49.910	49.910	
Trailing Edge	-0.183	-0.183	
0.25 Element Line	41.675	41.675	
Chords:			
Root (Wing Sta. 0.0)	760.56	3.0422	
Tip, (equivalent)	159.72	0.6388	
MAC	525.4	2.0976	
Fus. Sta. of .25 MAC	1132.98	4.5319	
W.P. of .25 MAC	304.55	1.2182	
B.L. of .25 MAC	196.09	.7843	
Airfoil Section			
Root			
Tip			
EXPOSED DATA			
Area	2203.00	0.03524	
Span, (equivalent)	795.86	3.1834	
Aspect Ratio	1.966	1.966	
Taper Ratio	0.260	0.260	
Chords			
Root	641.57	2.5662	
Tip	166.68	.6667	
MAC	450.63	1.8025	
Fus. Sta. of .25 MAC	1190.82	4.7633	
W.P. of .25 MAC	305.47	1.2219	
B.L. of .25 MAC	260.80	1.0432	
Leading Edge Cuff			
Planform Area (In W,R,P), Ft.^{2}		271.39	0043
Leading edge intersects fuselage ML - @ sta. in.		540.00	2.1600

MSFC - Form 263-B (February 1972)

TABLE IV. (Continued)
MODEL DIMENSIONAL DATA
NR ATP BASELINE ORBITER CONFIGURATION

MODEL COMPONENT : ELEVON - EI (DATA FOR 1 OF 2 SIDES)

GENERAL DESCRIPTION : FULL SPAN, CONSTANT CHORD ELEVON LOCATED ON WING WI.

MODEL SCALE = 0.004

DRAWING NUMBER : VL70-000001

DIMENSIONS :	FULL SCALE	MODEL SCALE
Area	347.2	.00555
Span (equivalent)	384.0	1.536
Inb'd equivalent chord	134.38	.537
Outb'd equivalent chord	134.38	.537
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	.209	.209
At Outb'd equiv. chord	.805	.805
Sweep Back Angles, degrees		
Leading Edge	-0.183	-0.183
Trailing Edge	-0.183	-0.183
Hingeline	-0.183	-0.183
Area Moment (Normal to hinge line) (Product of Area and Mean Chord)	4164.40	0.00026

TABLE IV. (Continued)
NR ATP BASELINE ORBITER
CONFIGURATION

MODEL COMPONENT: VERTICAL TAIL - VI

GENERAL DESCRIPTION: CENTERLINE VERTICAL ON DELTA WING CONFIGURATION WITH DOUBLE WEDGE AIRFOIL AND ROUNDED LEADING EDGE. TOTAL DATA INCLUDES VOID AREA LISTED BELOW. SCALE MODEL = 0.004

DRAWING NUMBER: VL70-00000[1]

DIMENSIONS:	THEORETICAL		ACTUAL MEASURED
TOTAL DATA	FULL-SCALE	MODEL SCALE	MODEL SCALE
Area	415.25	.00664	
Planform	1.29	.00002	
Wetted	19.93	.00032	
Span (equivalent)	32.39	1.2956	
Aspect Ratio	1.675	1.675	
Rate of Taper	0.504	0.504	
Taper Ratio	0.424	0.424	
Dihedral Angle, degrees	-	-	
Incidence Angle, degrees	-	-	
Aerodynamic Twist, degrees	-	-	
Toe-In Angle	0.0	0.0	
Cant Angle	0.0	0.0	
Sweep Back Angles, degrees			
Leading Edge	45.000	45.000	
Trailing Edge	26.361	26.361	
0.25 Element Line	41.150	41.150	
Chords:			
Root (Wing Sta. 0.0)	275.52	1.1021	
Tip, (equivalent)	111.4	0.448	
MAC	205.0	0.820	
Fus. Sta. of .25 MAC	1462.2 [1]	5.849	
W.P. of .25 MAC	639.0	2.556	
B.L. of .25 MAC	0.0	0.0	
Airfoil Section 5° HALF ANGLE			
Root DOUBLE WEDGE WITH			
Tip ROUNDED L.E. =			
EXPOSED DATA			
Area			
Span, (equivalent)			
Aspect Ratio			
Taper Ratio			
Chords			
Root			
Tip			
MAC			
Fus. Sta. of .25 MAC			
W.P. of .25 MAC			
B.L. of .25 MAC			

*Void area located at the lower, aft portion of the surface

TABLE IV. (Continued)

NR ATP BASELINE ORBITER CONFIGURATION

MODEL COMPONENT: BODY - COOLANT INLET K1

GENERAL DESCRIPTION: COOLANT INLET PER LINES VL70-000012 AIR COOLANT DUCT MOLDED INTO 60% ELEMENT LINE OF VERTICAL TAIL.

SCALE MODEL .004

DRAWING NUMBER: VL70-000012

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length	143.00	0.572	
Max. Width			
Max. (DIA)	38.00		
Fineness Ratio			
Area			
Max. Cross-Sectional			
Planform			
Wetted			
Base			

FS 1307.0 IN. FS

BP = 0.00 IN. FS

WP = 539.00 IN. FS

TABLE IV. (Continued)

NR ATP BASELINE ORBITER
CONFIGURATION

MODEL COMPONENT: RUDDER - RI

GENERAL DESCRIPTION: RUDDER ON CENTERLINE VERTICAL TAIL, VI

MODEL SCALE = 0.004

DRAWING NUMBER: VL70-000001

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Area ~FT^2	117.7	.00188	
Span (equivalent) ~in	226.0	0.9040	
Inb'd equivalent chord ~in	97.09	.3884	
Outb'd equivalent chord ~in	52.02	.2081	
Ratio movable surface chord/ total surface chord			
At Inb'd equiv. chord	0.400	0.400	
At Outb'd equiv. chord	0.400	0.400	
Sweep Back Angles, degrees			
Leading Edge	34.889	34.889	
Tailing Edge	26.361	26.361	
Hingeline	34.889	34.889	
Area Moment (Normal to hinge line) (PRODUCT OF AREA AND MEAN CHORD)	647.77	.00004	

TABLE IV. (Continued)

NR ATP BASELINE INTERGRATED LAUNCH CONFIGURATION

MODEL COMPONENT: BODY - T_3

GENERAL DESCRIPTION: EXTERNAL TANK (BASELINE DIA.) WITH OGIVE NOSE CONE AND RETRO ROCKET

DRAWING NUMBER: MSFC 80M 32569 (NOSE) & 80M 42575 (body)

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length	2467.8 in.	9.871 in.	—
Max. Width	318 in.	1.272 in.	—
Max. Depth	318 in.	1.272 in.	—
Fineness Ratio	7.76	7.76	—
Area			
Max. Cross-Sectional	551.54 ft.^{2}	1.271 in.^{2}	—
Planform	—	—	—
Wetted	—	—	—
Base	551.54 ft.^{2}	1.271 in.^{2}	—

TABLE IV. (Continued)

MODEL COMPONENT: TANK - T_5

GENERAL DESCRIPTION: EXTERNAL TANK CONFIG. RETRO PACKAGE REMOVED AND REPLACED BY NOSE COVER BODY OF REVOLUTION, OGIVE NOSE CONE

SCALE MODEL = 0.004

TEST: MSFC - TWT - 545

DRAWING NUMBER

DIMENSION:	FULL SCALE	MODEL SCALE
Length - IN.	2324.50	9.298
Max Width CD1A1	318.0	1.272
Max Depth		
Fineness Ratio 4D	7.310	7.310
Area - FT^2		
Max Cross-Sectional	551.226	.00882
Planform		
Wetted		
Base		

FS (ORBITER) = 0.00 = TANK STAT. 1019.3 IN FS = 4.0772 INMS

WP (T.S. 1019.3) = 400 - 302 = 98 IN FS = 0.392 INMS

BP (TS ℄) = 0.00

TABLE IV. (Continued)
NR ATP BASELINE INTEGRATED LAUNCH CONFIGURATION

MODEL COMPONENT: BODY - S_1

GENERAL DESCRIPTION: SOLID ROCKET BOOSTER (BASELINE DIA) WITH HOLD DOWN ARMS (0.004 Scale, used with integrated vehicle)

DRAWING NUMBER MSFC 80M32563-68 & 42574

DIMENSION:	FULL SCALE	MODEL SCALE
Length	2217 in.	8.868 in.
Max Width	156 in.	0.624 in.
Max Depth	156 in.	0.624 in.
Fineness Ratio	14.21	14.21
Area		
Max Cross-Sectional	132.5 ft^2	0.306 $in.^2$
Planform	---	---
Wetted	---	---
Base	132.5 $ft.^2$	0.306 $in.^2$

TABLE IV. (Continued)

$S\frac{1}{2}$ - SRB ALONE

SYMBOL		DESCRIPTION
N_1	=	156 inch solid rocket booster nose, cone angle is 17° 30'
B_1	=	156 inch solid rocket booster body
E_1	=	156 inch solid rocket booster shroud/engine cut to allow for sting mounting

TABLE IV. (Continued)

MODEL COMPONENT: NOSE OF SRB - N1

GENERAL DESCRIPTION: 156" solid rocket booster nose cone angle in 18° with spherical radius nose cap.

DRAWING NUMBER:

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
Length	214 in.	1.097 in.	
Max. Width	156 in.	0.8 in.	
Max. Depth	156 in.	0.8 in.	
Fineness Ratio	1.37	1.37	
Area			
Max. Cross-Sectional	19110 sq. in.	0.503 sq. in.	
Planform			
Wetted			
Base	19110 sq. in.	0.503 sq. in.	

TABLE IV. (Continued)

MODEL COMPONENT: BODY OF SRB - B1

GENERAL DESCRIPTION: 156" solid rocket booster body

DRAWING NUMBER:

DIMENSIONS:	THEORETICAL		ACTUAL MEASURED
	FULL-SCALE	MODEL SCALE	MODEL SCALE
Length	1604 in.	8.223 in.	
Max. Width	156 in.	0.8 in.	
Max. Depth	156 in.	0.8 in.	
Fineness Ratio	10.28	10.28	
Area			
Max. Cross-Sectional	19110 sq. in.	0.503 sq. in.	
Planform			
Wetted			
Base	19110 sq. in.	0.503 sq. in.	

TABLE IV. (Concluded)

MODEL COMPONENT: Engine OF SRB - E1

GENERAL DESCRIPTION: 156 solid rocket booster nozzle consist of a 16° 30' cone intersecting a 16° 11' shroud at a cant of 11° from SRB center line.

DRAWING NUMBER:

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE	ACTUAL MEASURED MODEL SCALE
SHROUD:			
Length	234 in.	1.198 in.	
CANT ANGLE	11°	11°	
ENGINE NOZZLE:			
Length	162 in.	0.832 in.	
Nozzle Exit Dia	223 in.	1.144 in.	
Theoretical Area	39093 in.^{2}	1.028 in.^{2}	
Wetted Area Approx.	145 in.^{2}	Approx. 0.744 in.^{2}	

NOTES:

1. POSITIVE DIRECTIONS OF FORCE COFFICIENTS MOMENT COEFFICIENTS, AND ANGLES ARE INDICATED BY ARROWS.

2. FOR CLARITY, ORIGINS OF WIND AND STABILITY AXES HAVE BEEN DISPLACED FROM THE CENTER OF GRAVITY.

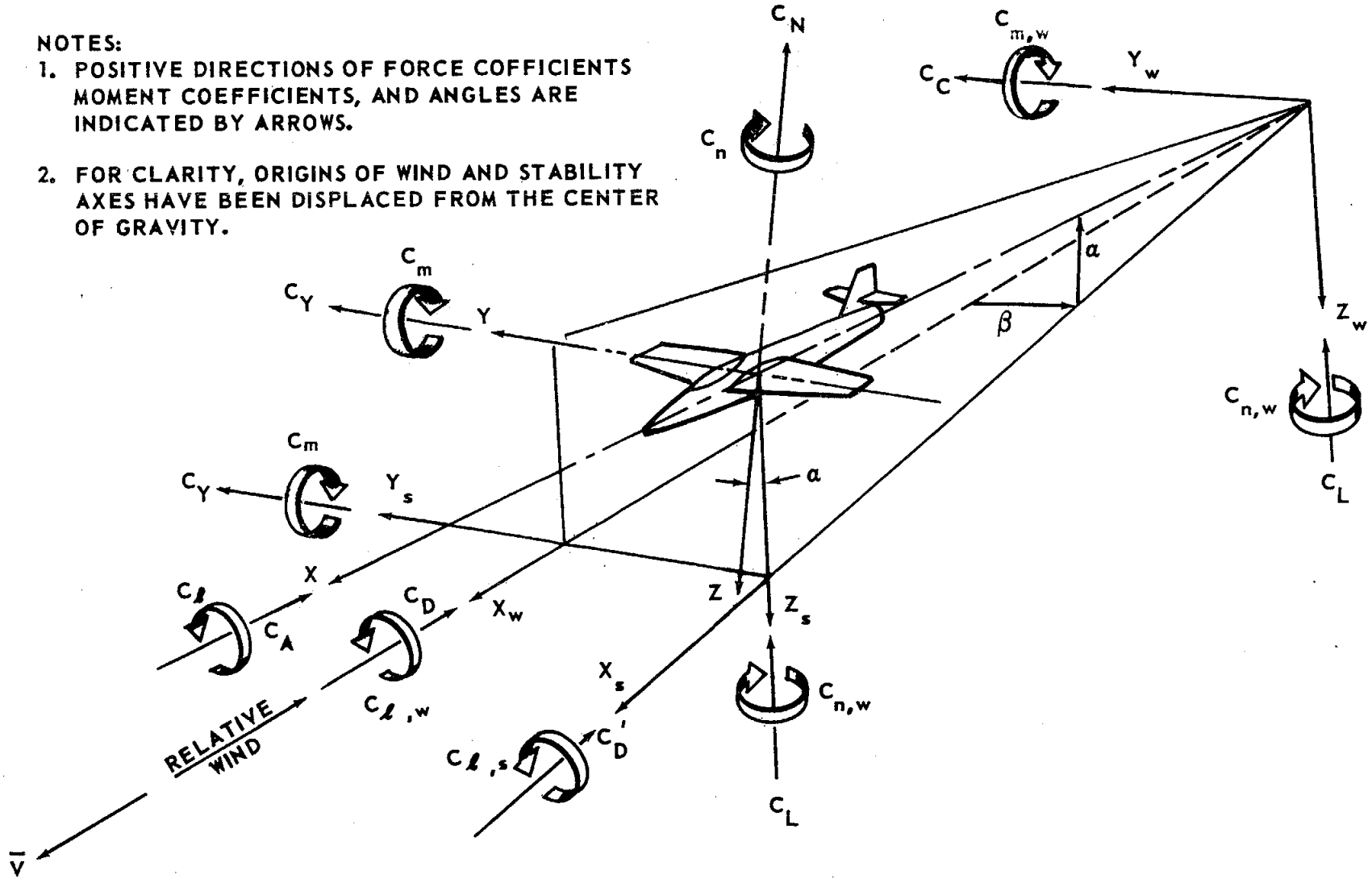


Figure 1. Axis Systems.

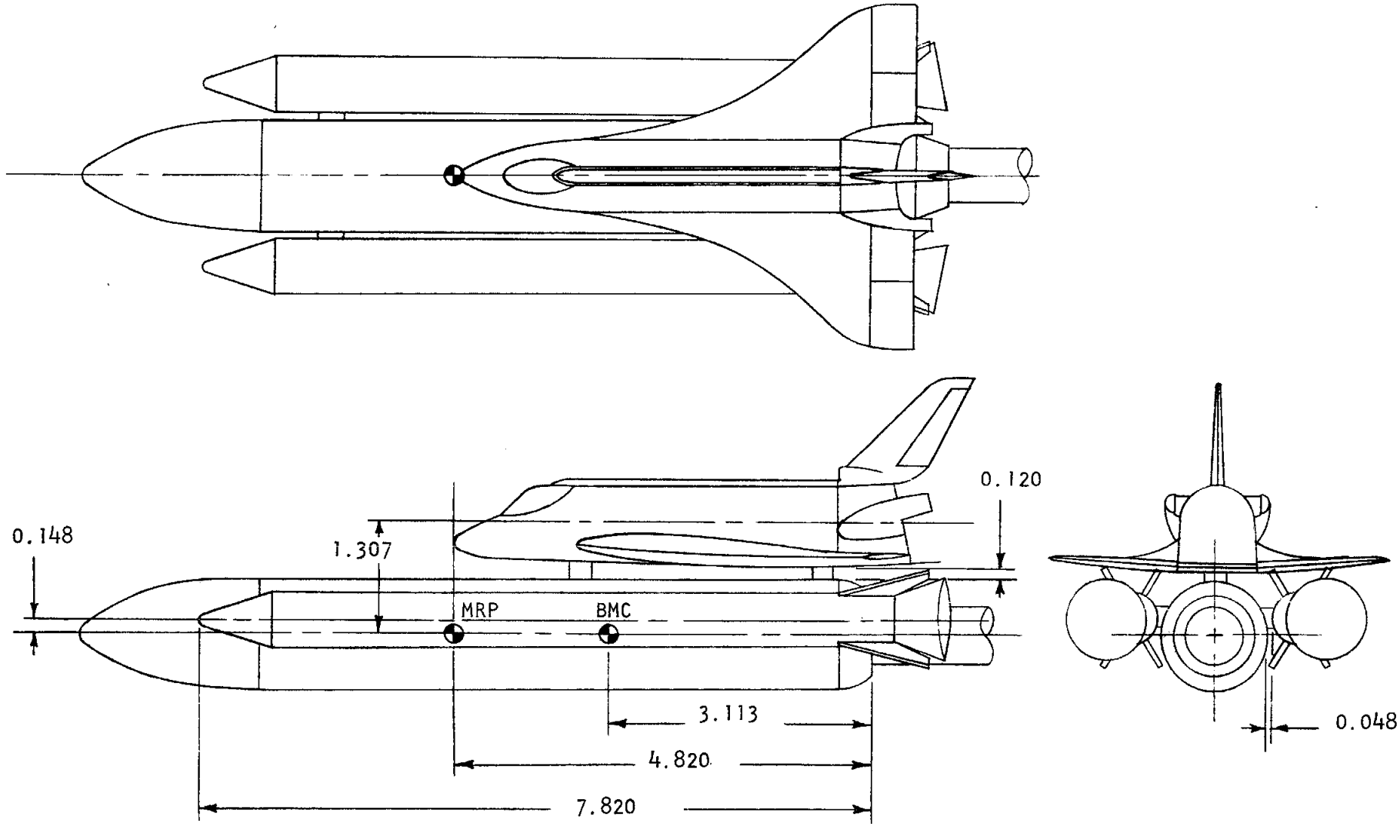


FIGURE 2. General Arrangement Launch Configuration (T5) (S1) (O1)

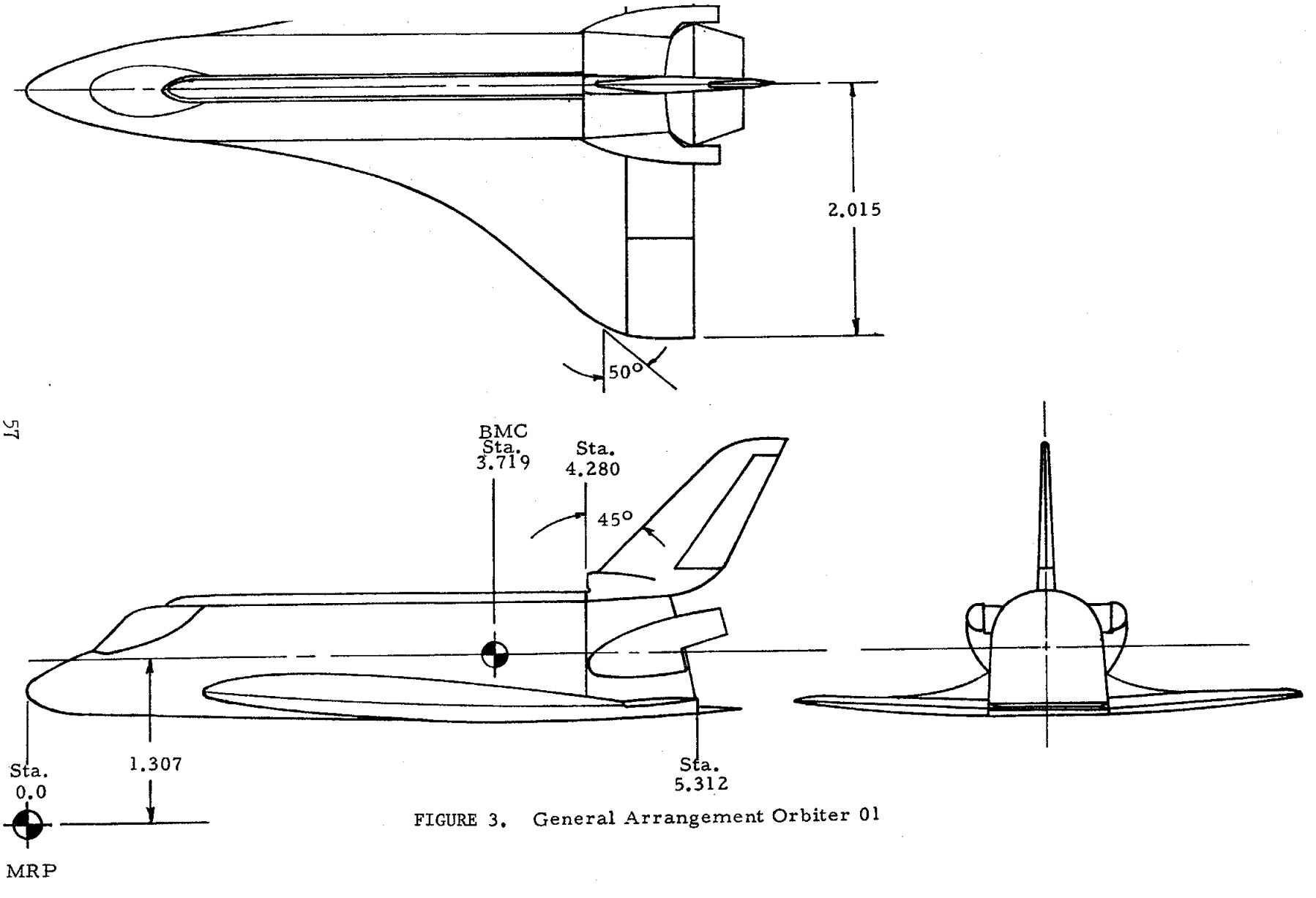
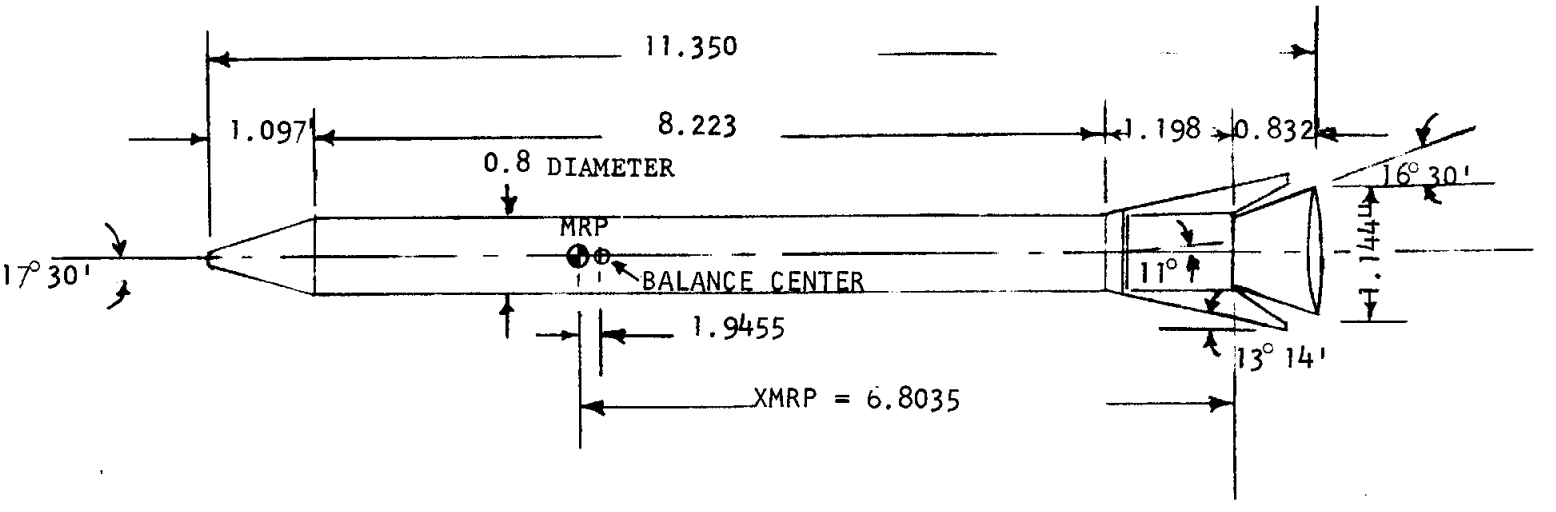


FIGURE 3. General Arrangement Orbiter 01



ALL LINEAR DIMENSIONS IN INCHES
0.005128 SCALE

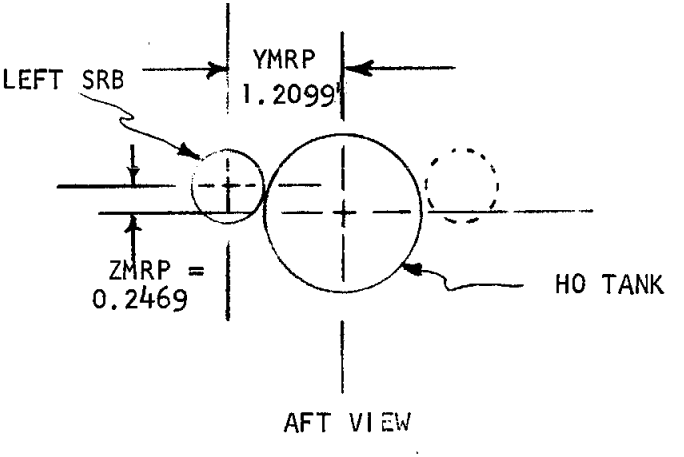


FIGURE 4. SRB General Layout For S_2^1 Configuration (SRB Alone Test)

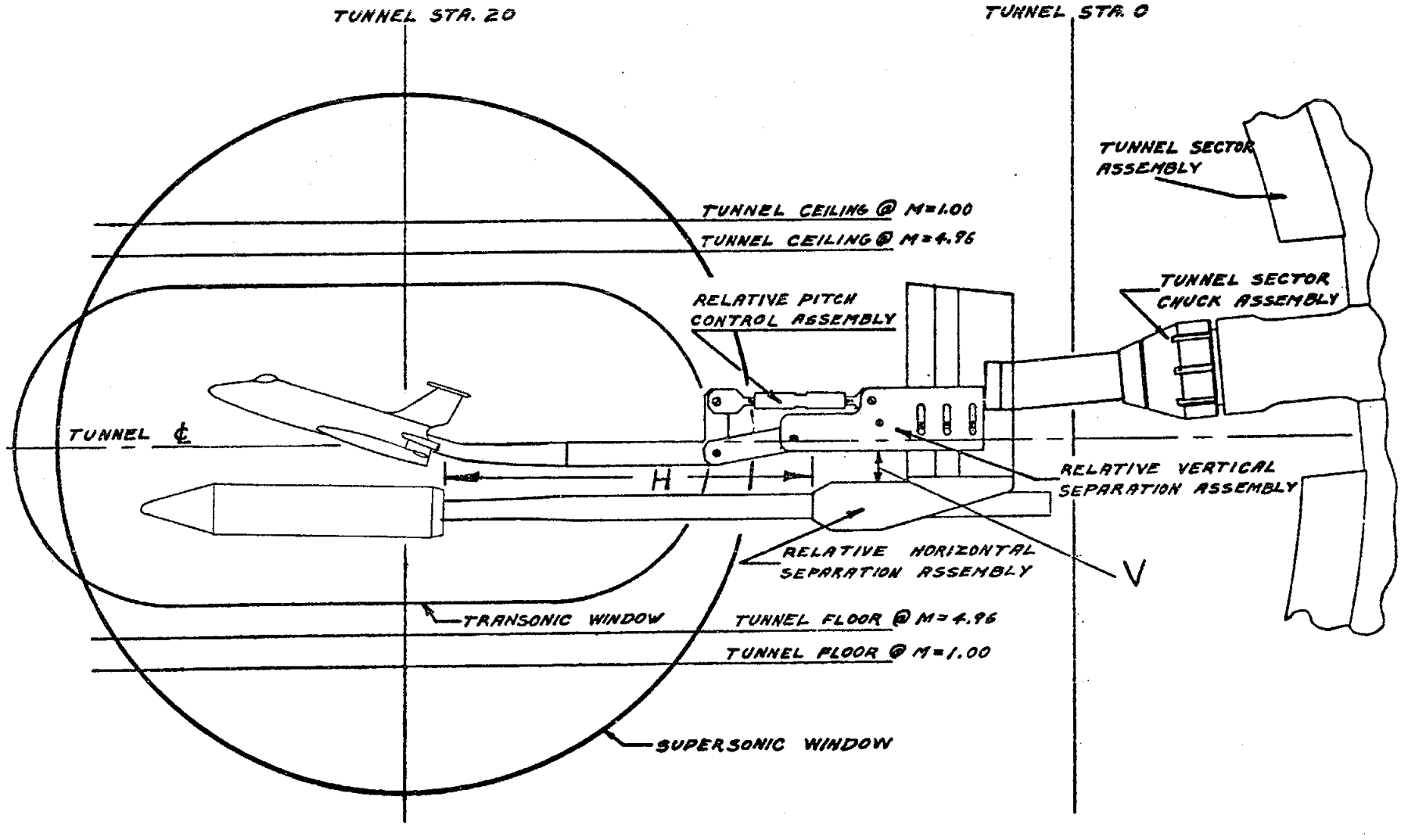


FIGURE 5. Space Shuttle Parallel Staging System for the MSFC 14 x 14-Inch Trisonic Wind Tunnel

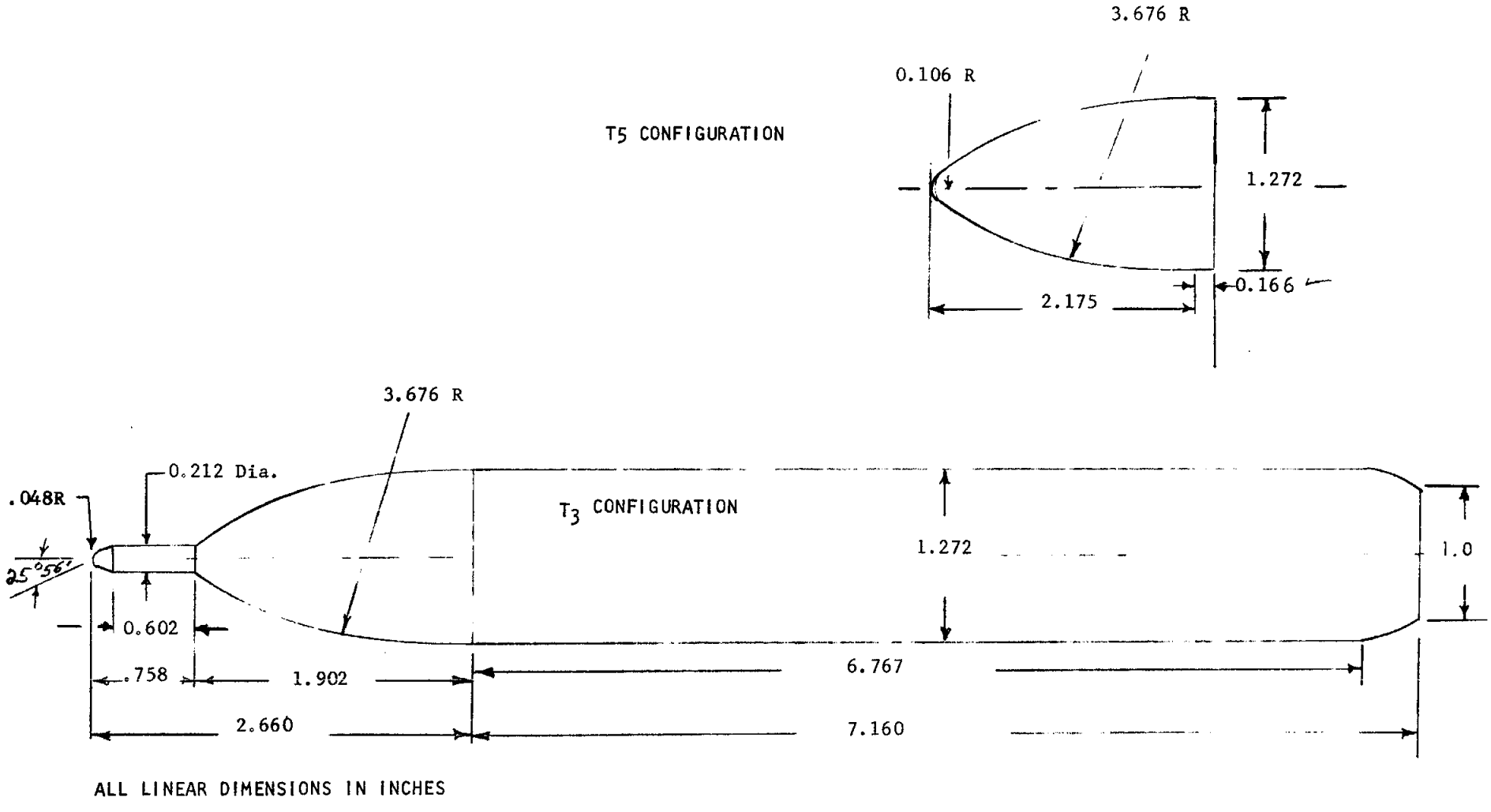
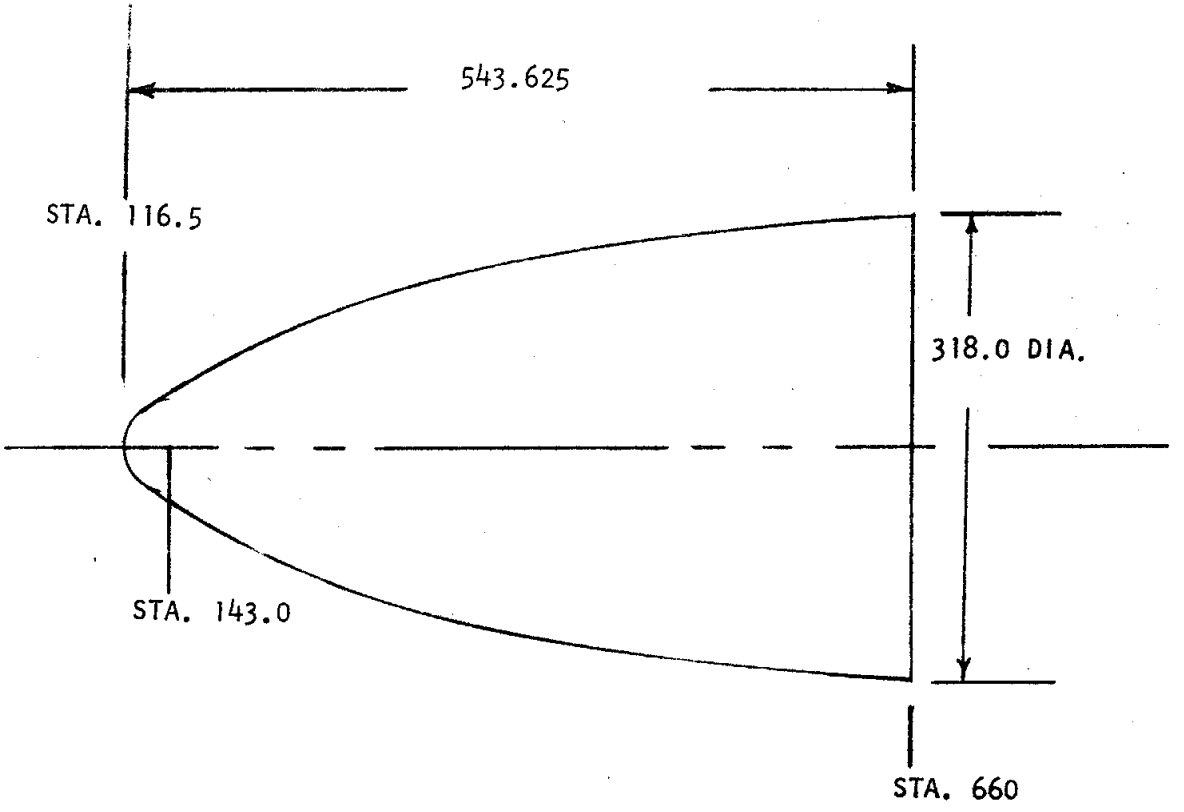


FIGURE 6. WIND TUNNEL TEST MODEL OF EXTERNAL TANK CONFIGURATIONS



NOSE RADIUS = 26.5 IN FS @ STA. 116.5 IN FS

= 0.106 IN MS .466 IN MS

CIRCULAR ARC OGIVE BETWEEN STA. 143.0 TO 660 IN FS

.572 TO 2.64 IN MS

CYLINDER STA. 660.0 TO 2441.0 IN FS

2.64 TO 9.7640 IN MS

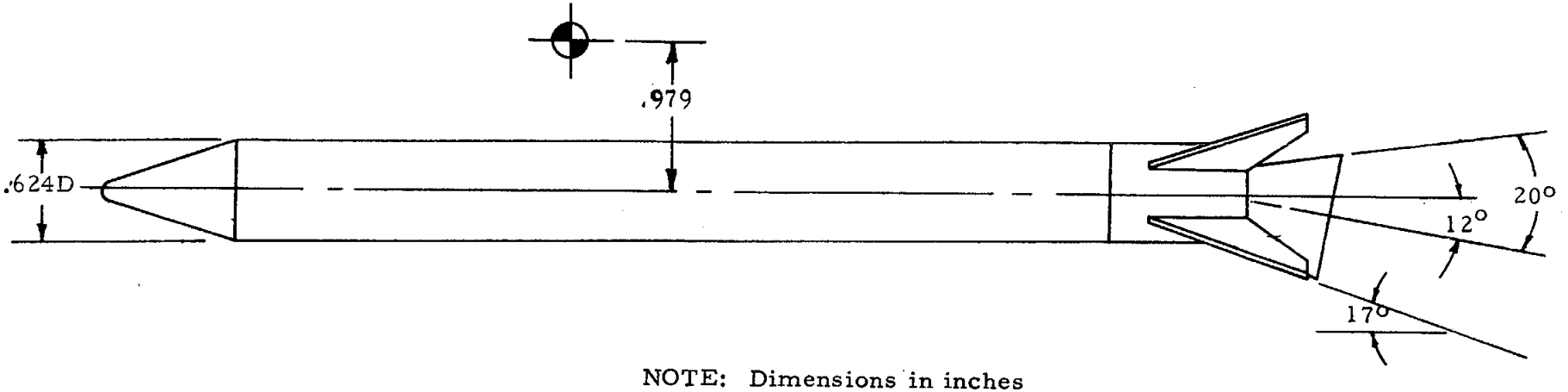
MAX. X-SECT. AREA = 551.226 FT^2 FS

L/D = 2324.5 ÷ 318.0 = 7.3097

SCALE 2 TO 1

OGIVE NOSE CONE WITH RETRO PACKAGE REMOVED REPLACED WITH .106 R. MS

FIGURE 7. EXTERNAL TANK NOSE DIMENSIONS



NOTE: Dimensions in inches
0.004 Scale

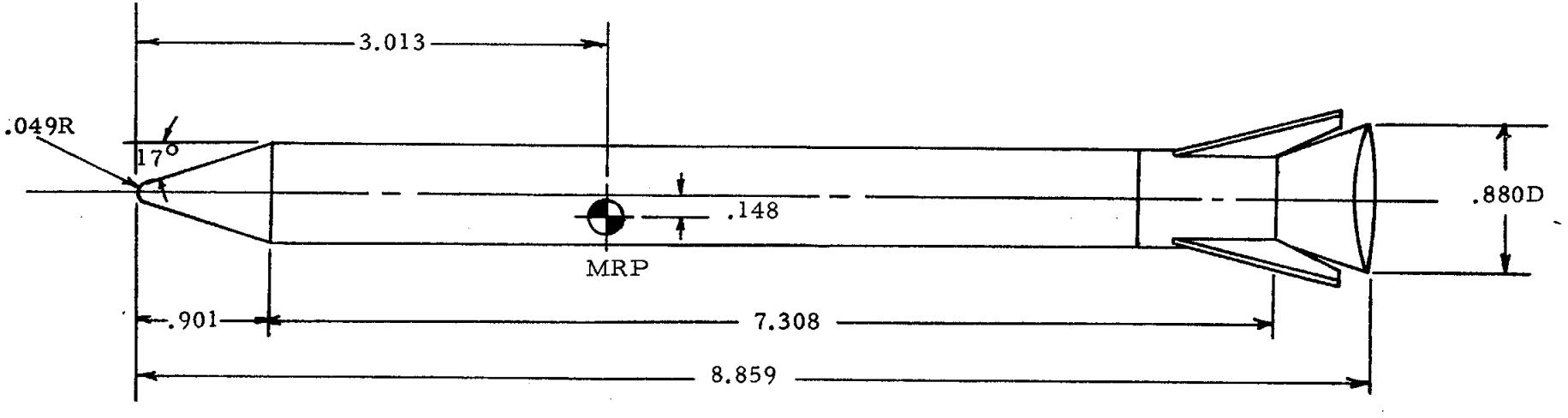


FIGURE 8. General Arrangement SRB S1

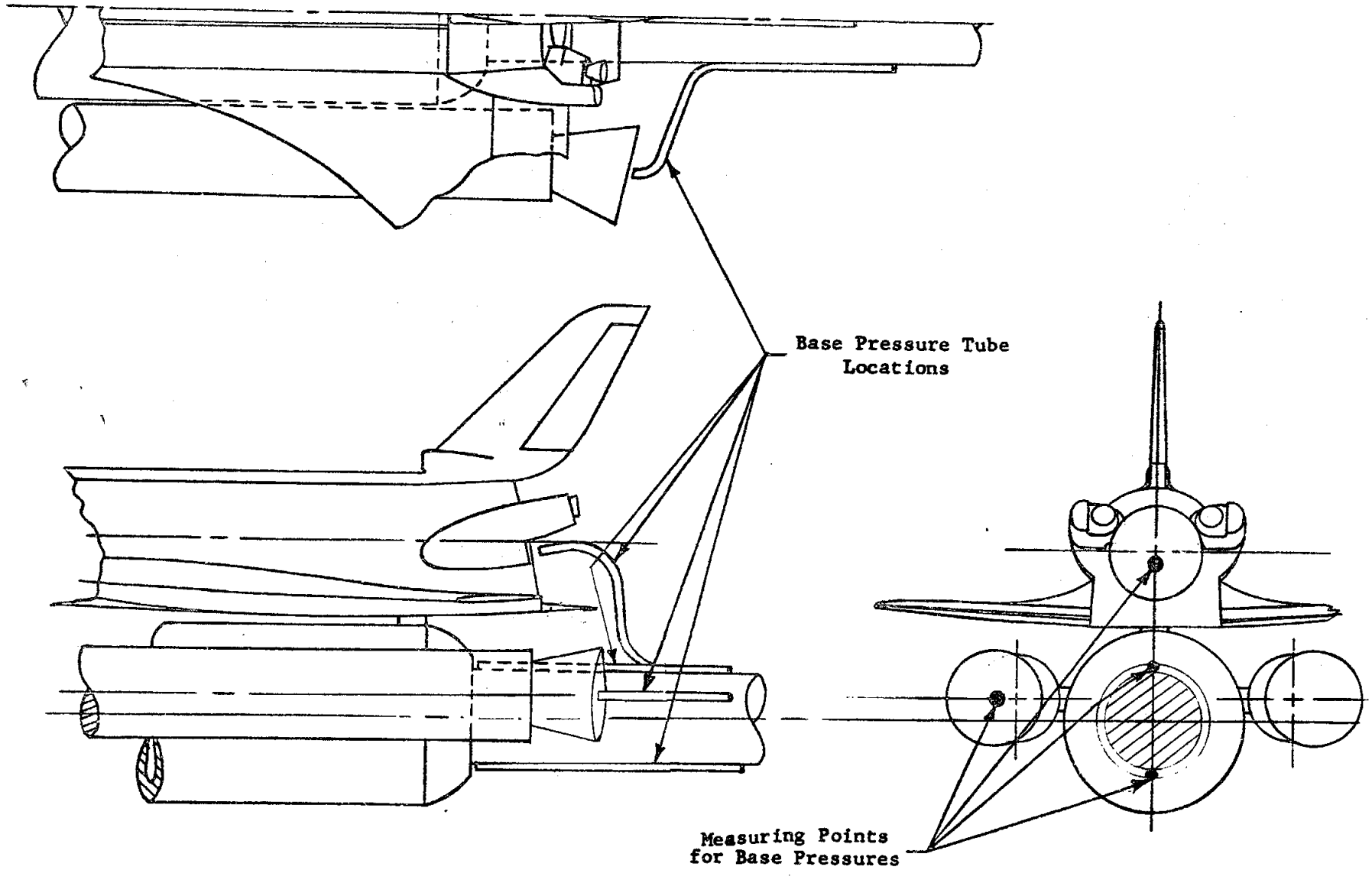


FIGURE 9.BASE PRESSURE MEASURING TUBE LOCATIONS

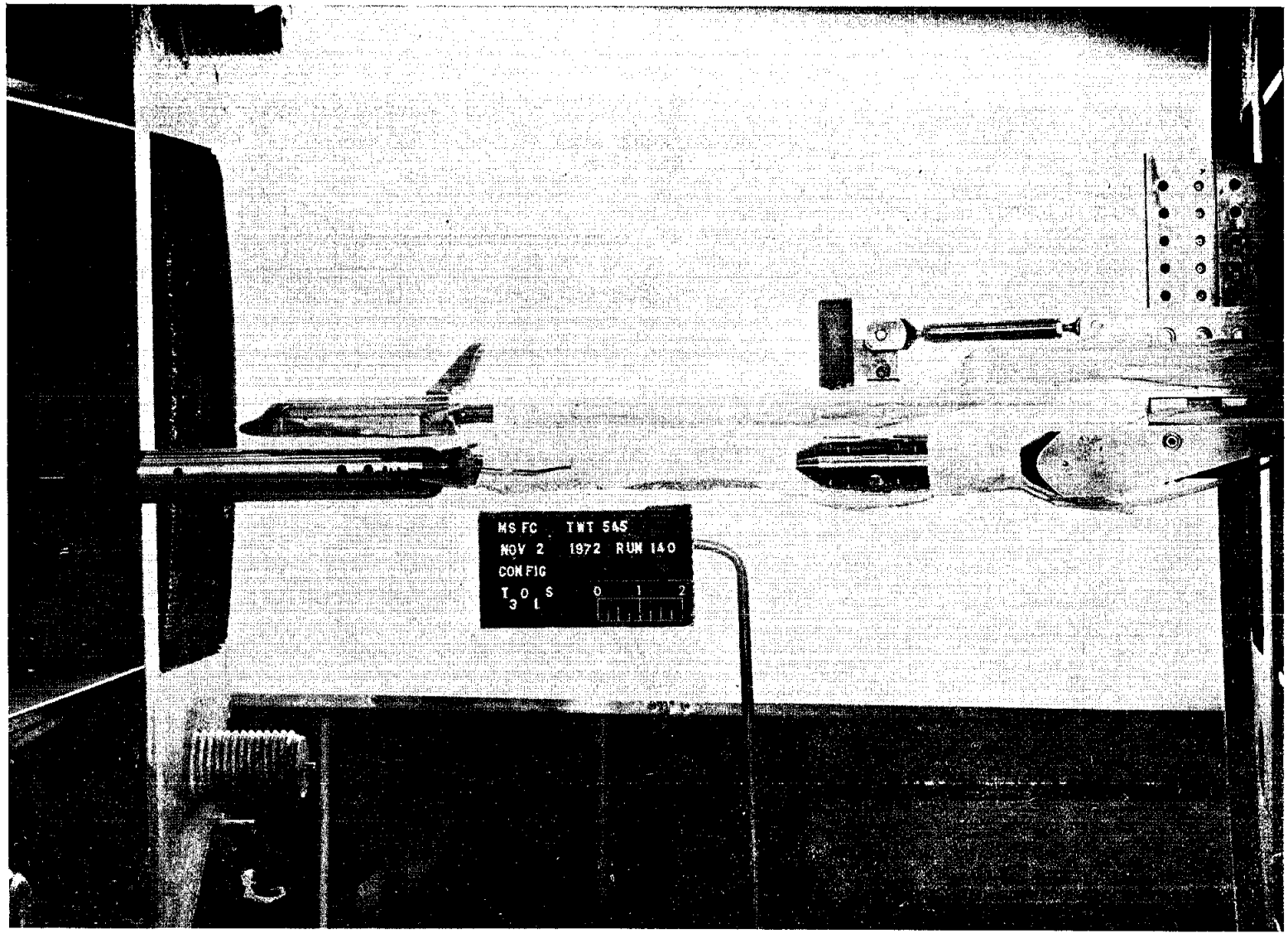


FIGURE 10. MODIFIED ATP LAUNCH CONFIGURATION WITH THE LEFT SRB MOUNTED ON EXTERNAL TANK (METRIC)

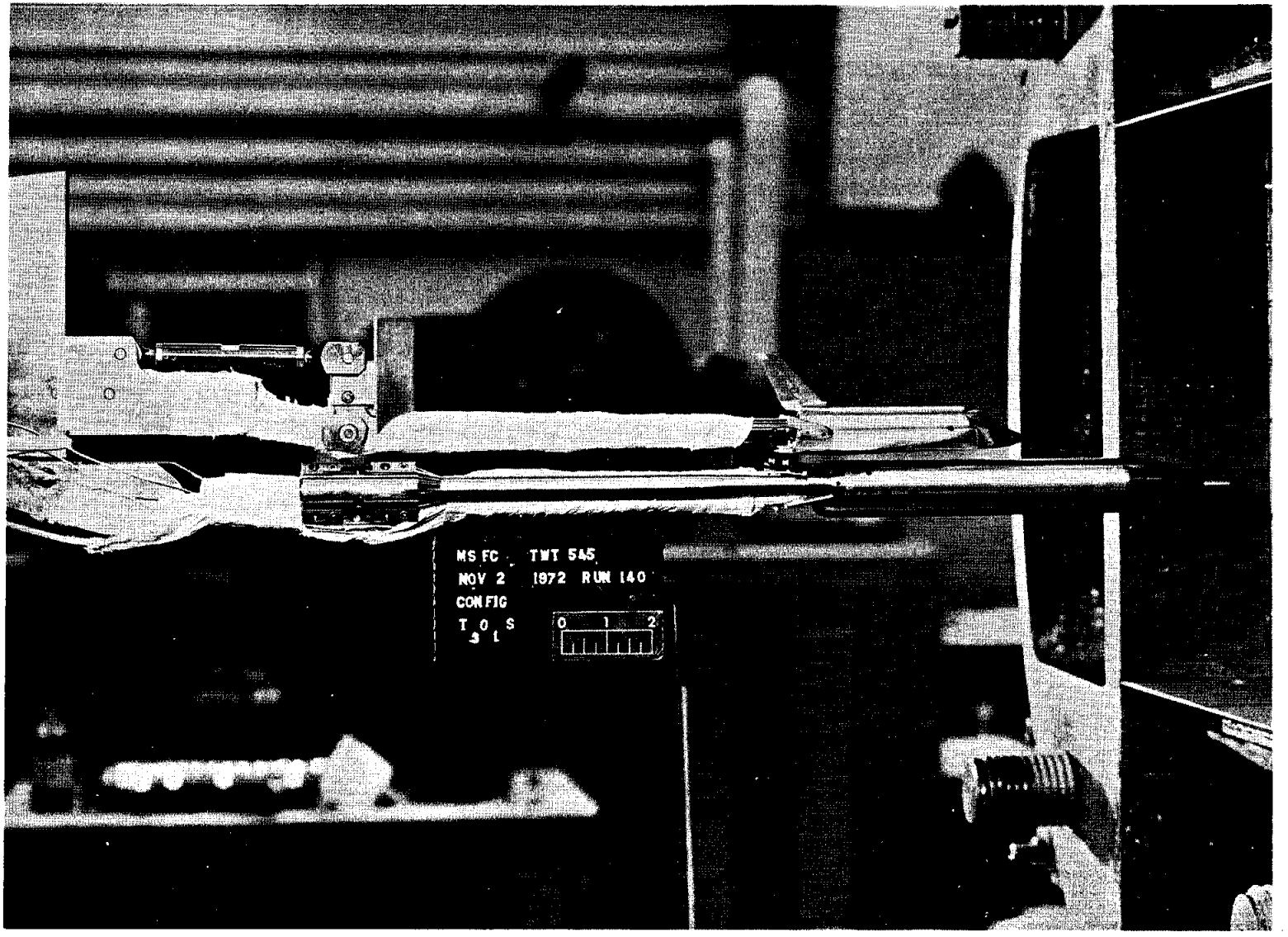


FIGURE 11. MODIFIED ATP LAUNCH CONFIGURATION WITH RIGHT SRB MOUNTED ON SEPARATE STING (NON-METRIC)

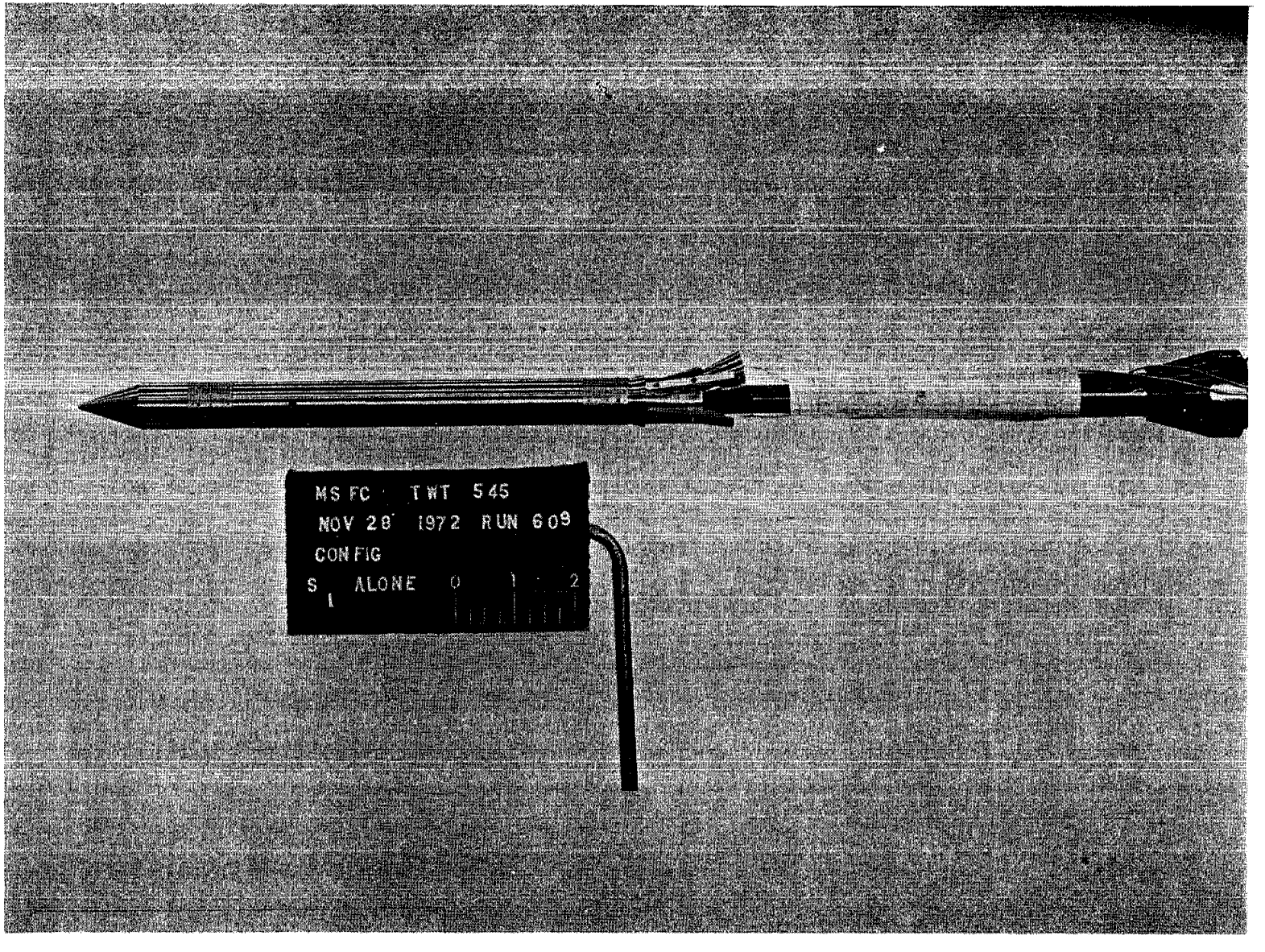


FIGURE 12. SRB ALONE CONFIGURATION

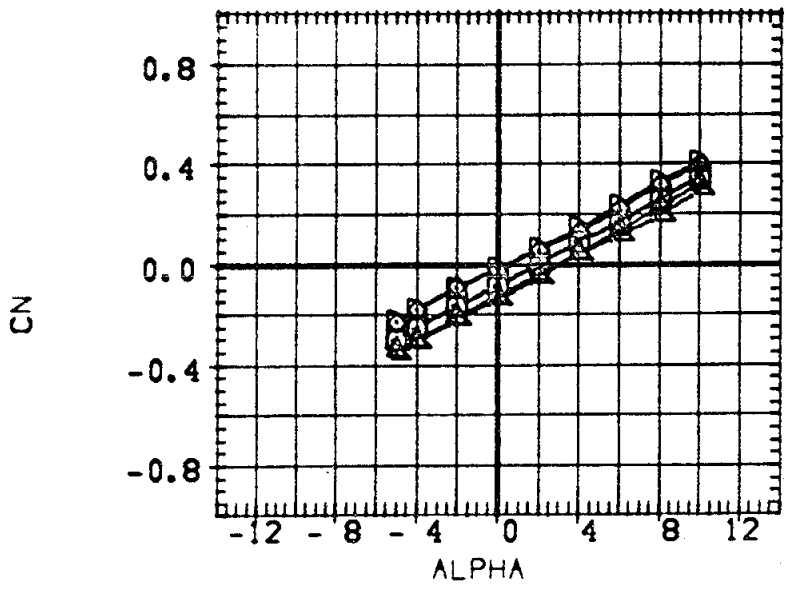
DATA FIGURES

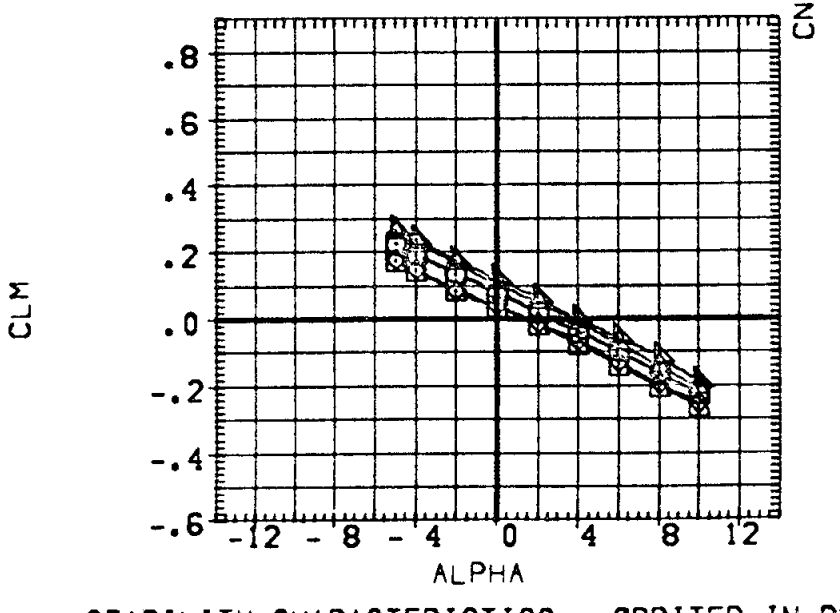
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AP2002)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AP2003)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AP2004)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AP2005)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AP2006)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)

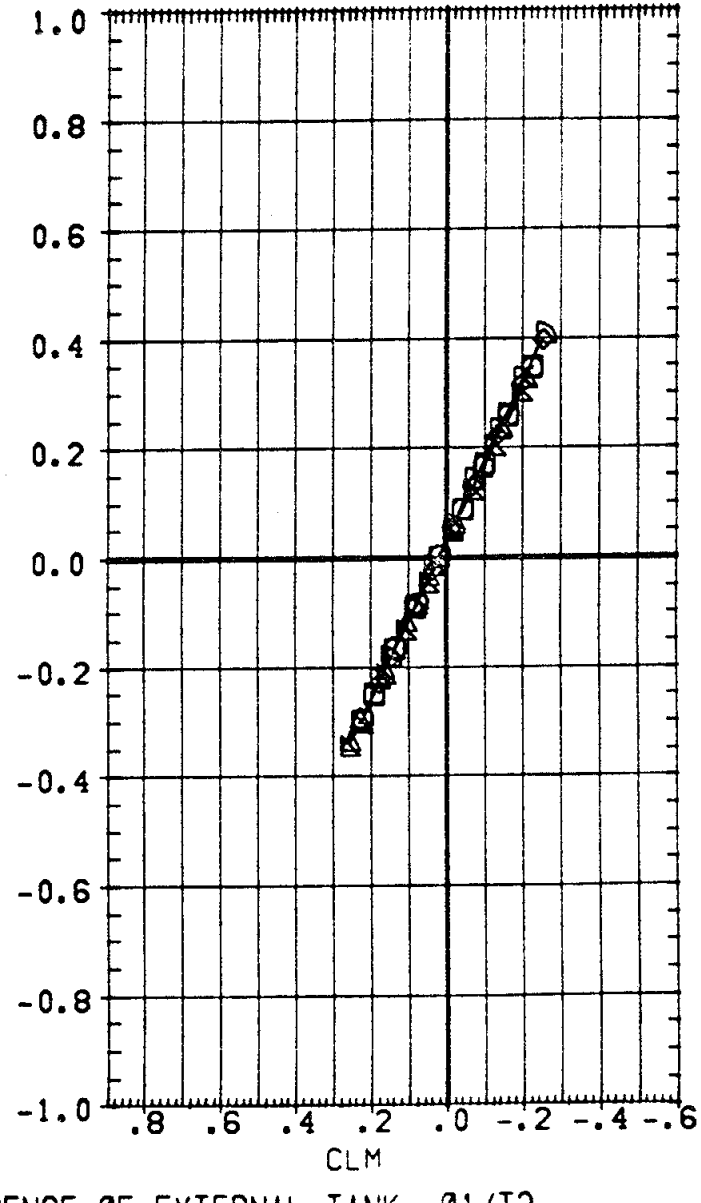
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







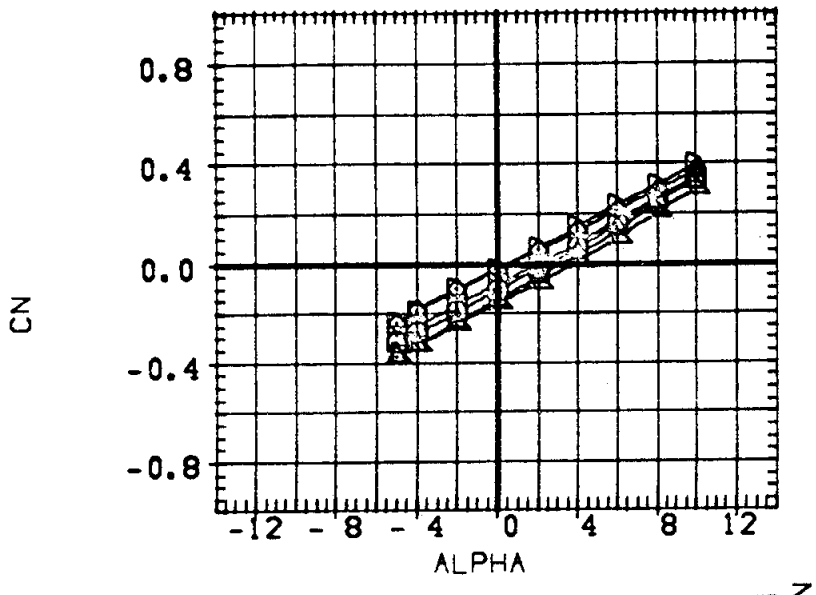
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

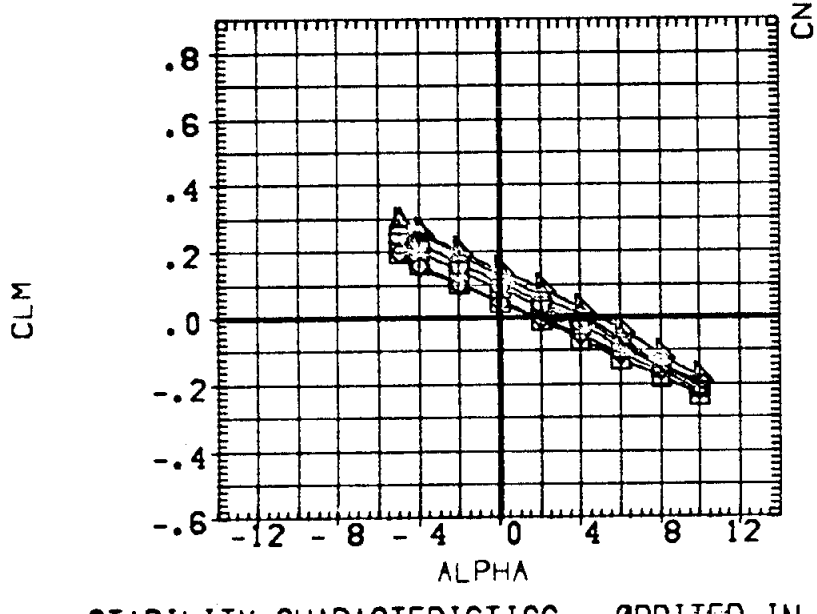
(A)MACH = .60

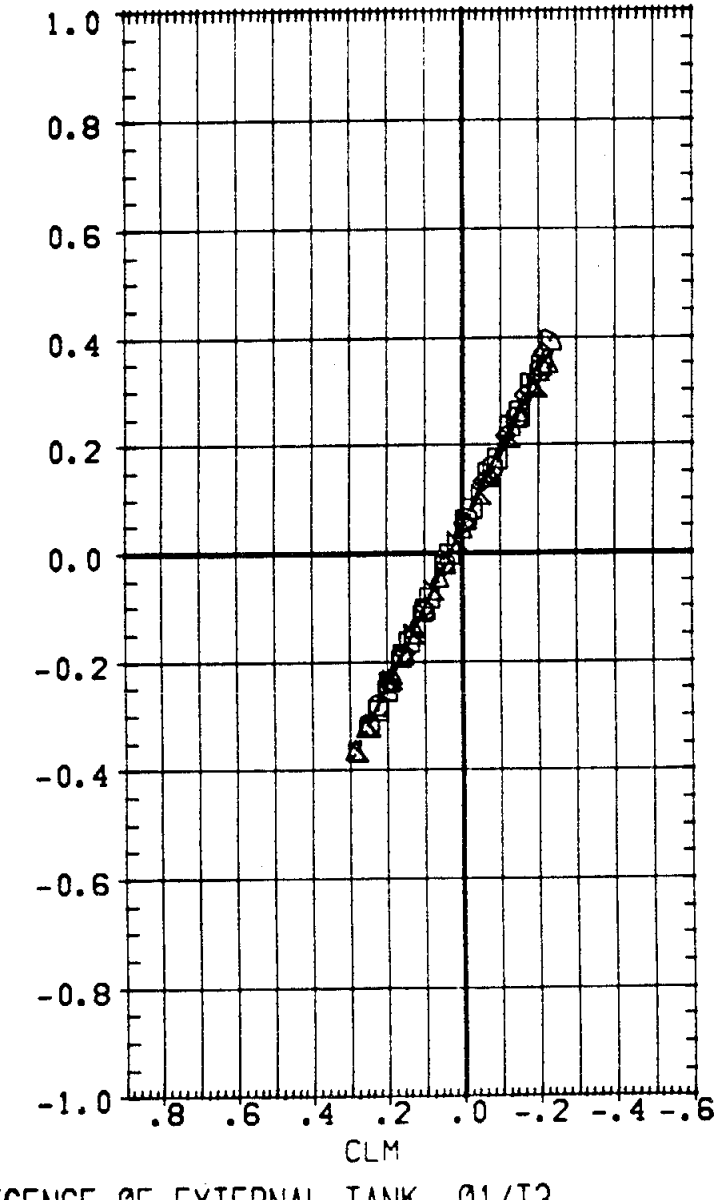
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (1A1) MOD ATP LV-(01)/(T3)
(A72002)	□	MSFC 545 (1A1) MOD ATP LV-(01)/(T3)
(A72003)	◇	MSFC 545 (1A1) MOD ATP LV-(01)/(T3)
(A72004)	△	MSFC 545 (1A1) MOD ATP LV-(01)/(T3)
(A72005)	▽	MSFC 545 (1A1) MOD ATP LV-(01)/(T3)
(A72006)	◁	MSFC 545 (1A1) MOD ATP LV-(01)/(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





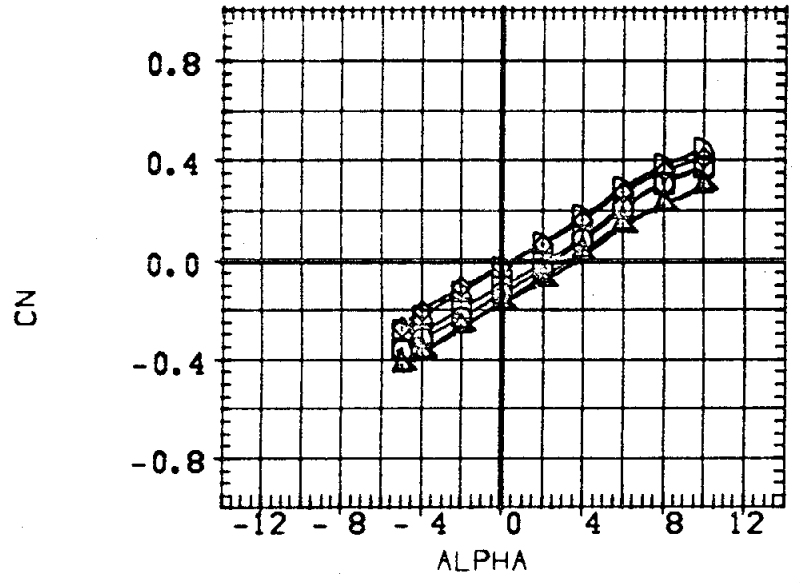


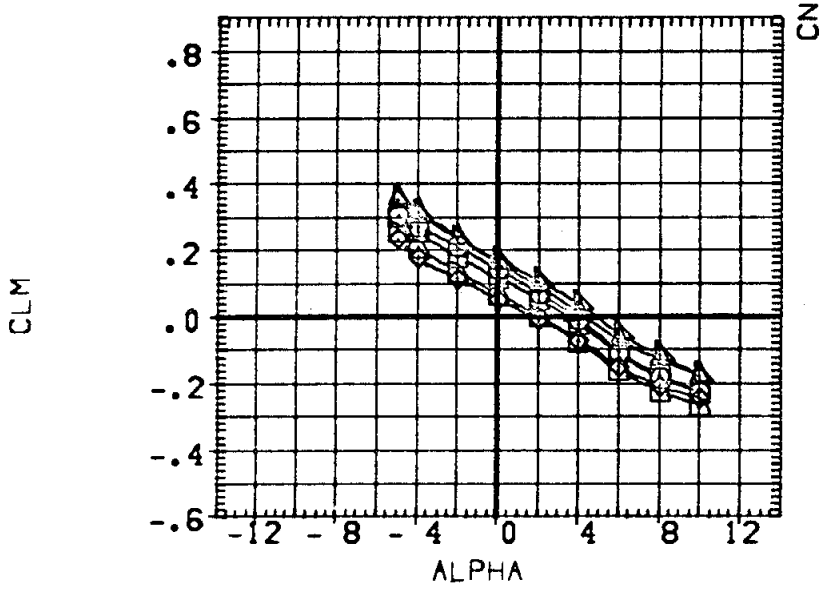
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

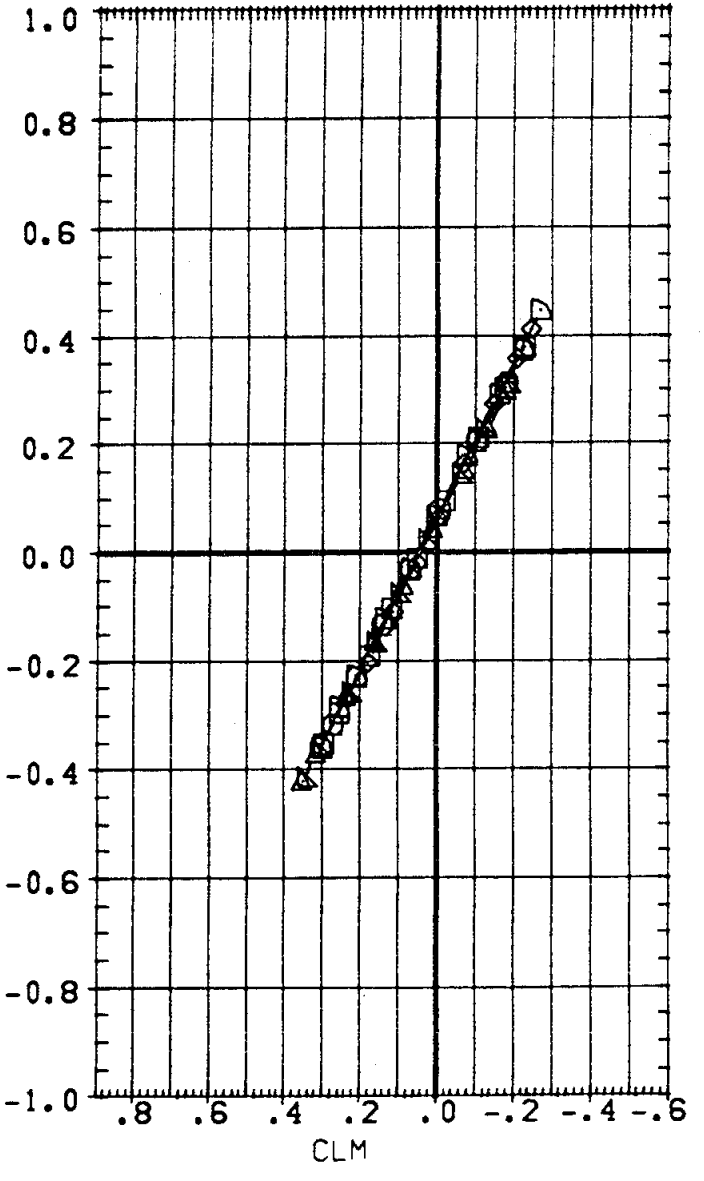
(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)	.000	.120	10.000	
(A72002)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)	-1.200	.120	10.000	
(A72003)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)	1.500	.120	10.000	
(A72004)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)	.000	.240	10.000	
(A72005)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)	-1.200	.240	10.000	
(A72006)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







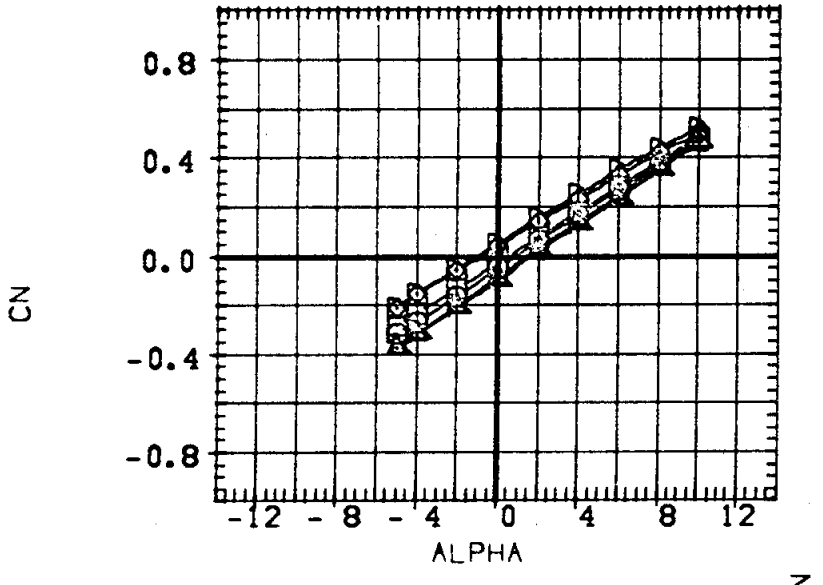
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

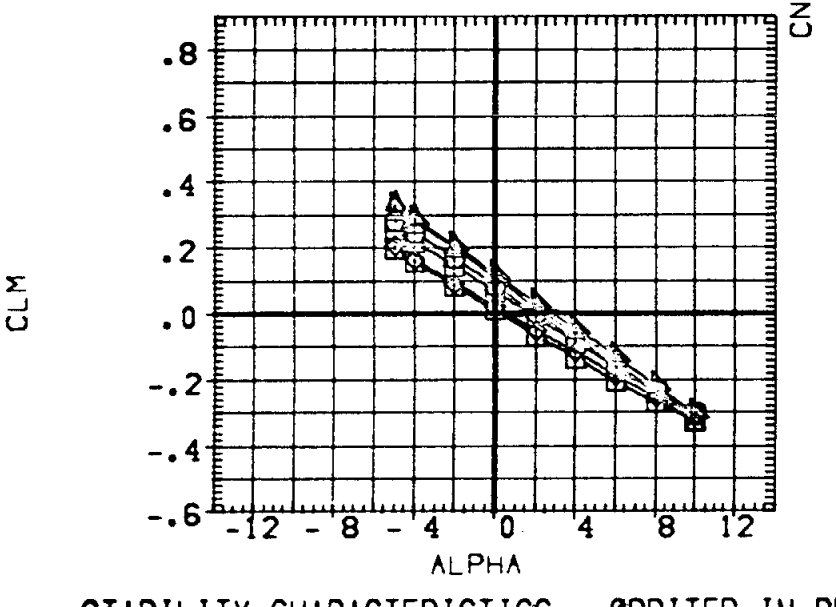
(C)MACH = 1.00

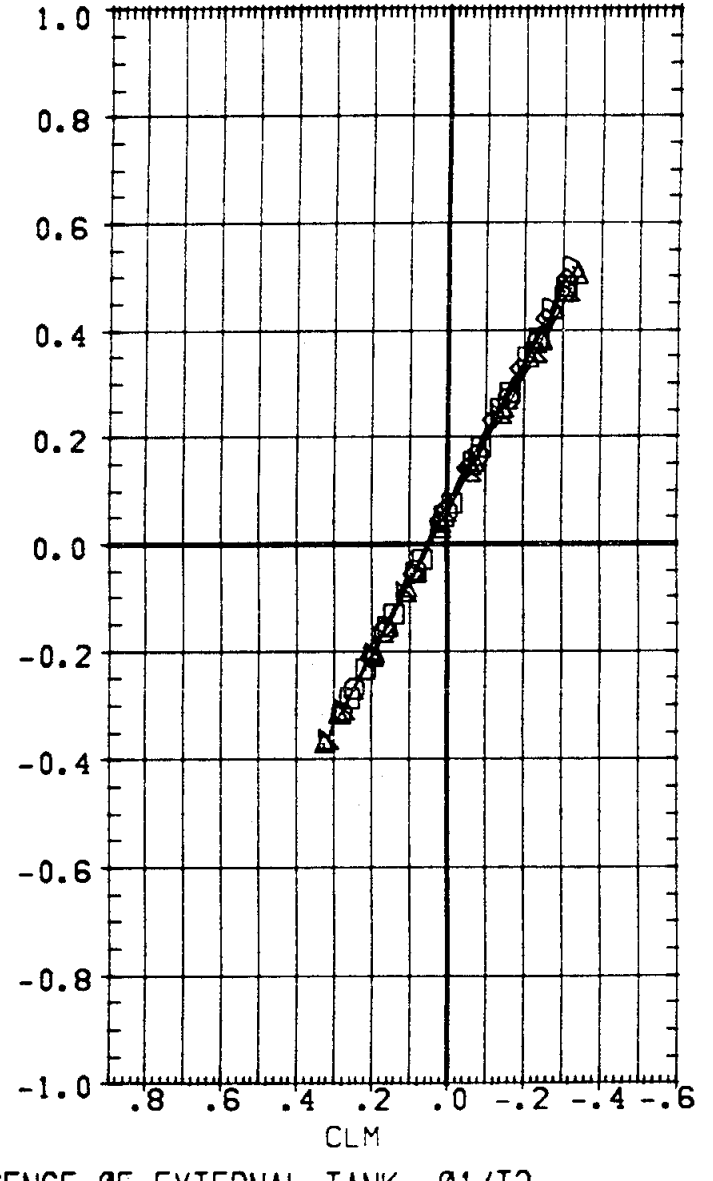
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72002)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72003)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72004)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72005)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72006)	▷	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

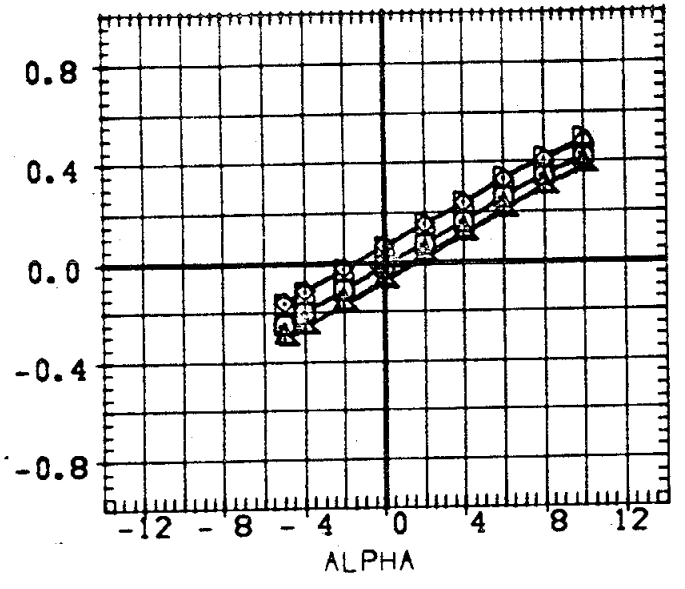
(D)MACH = 1.21

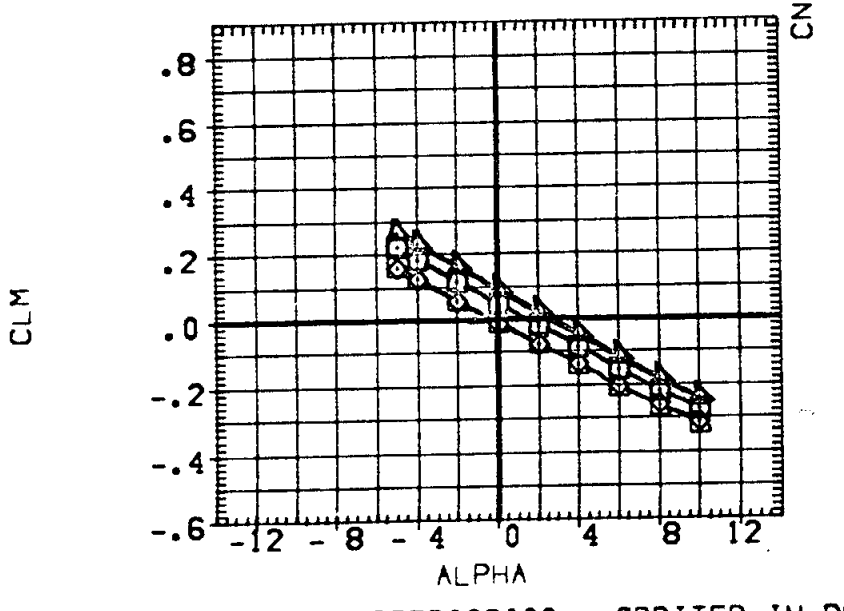
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(A72002)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(A72003)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(A72004)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(A72005)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(A72006)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)

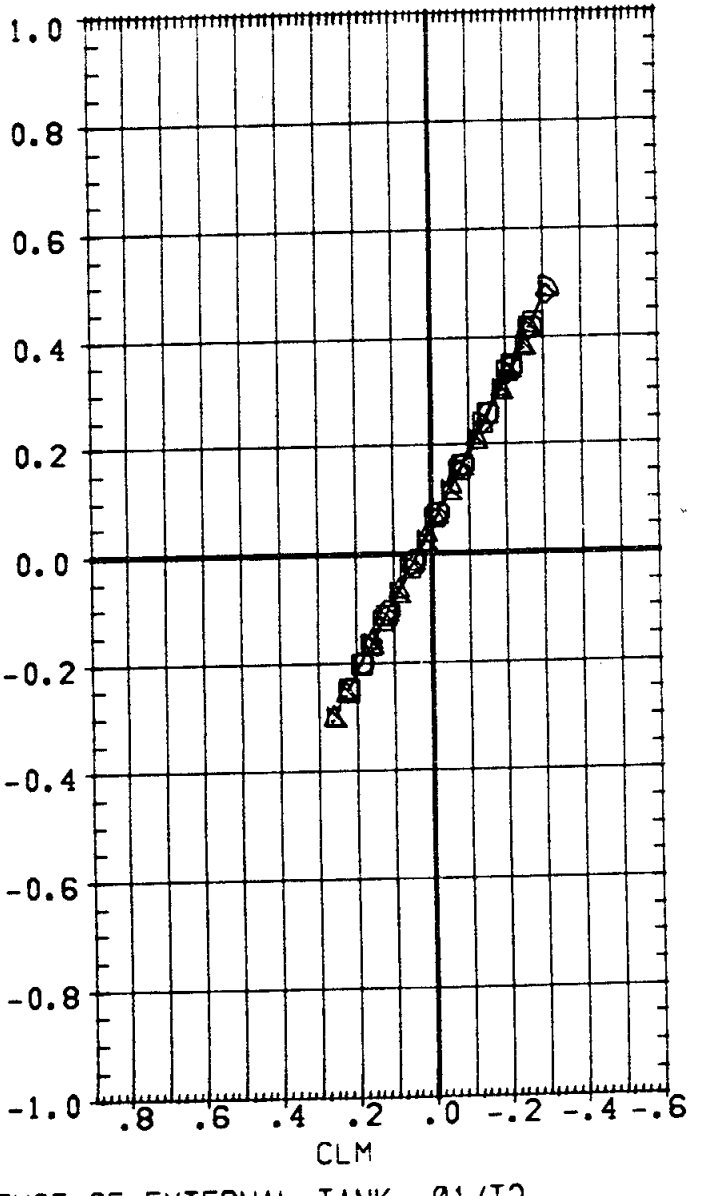
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







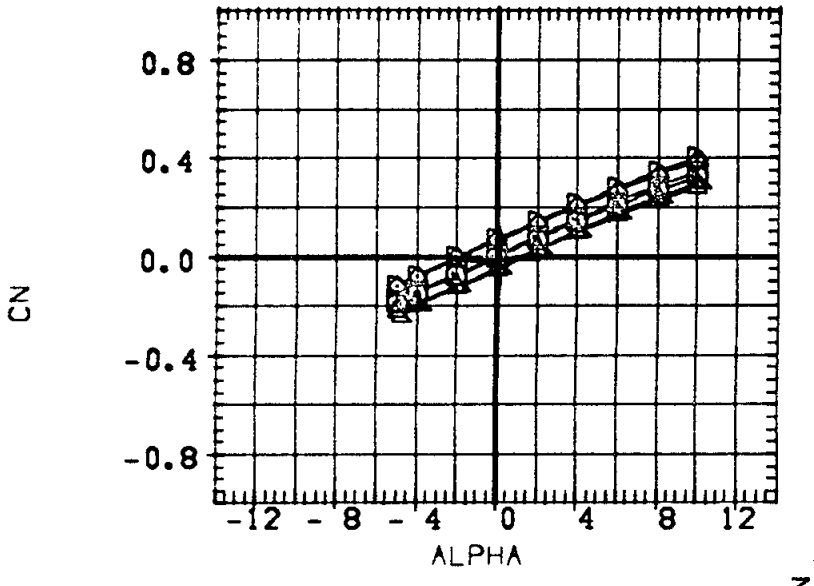
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

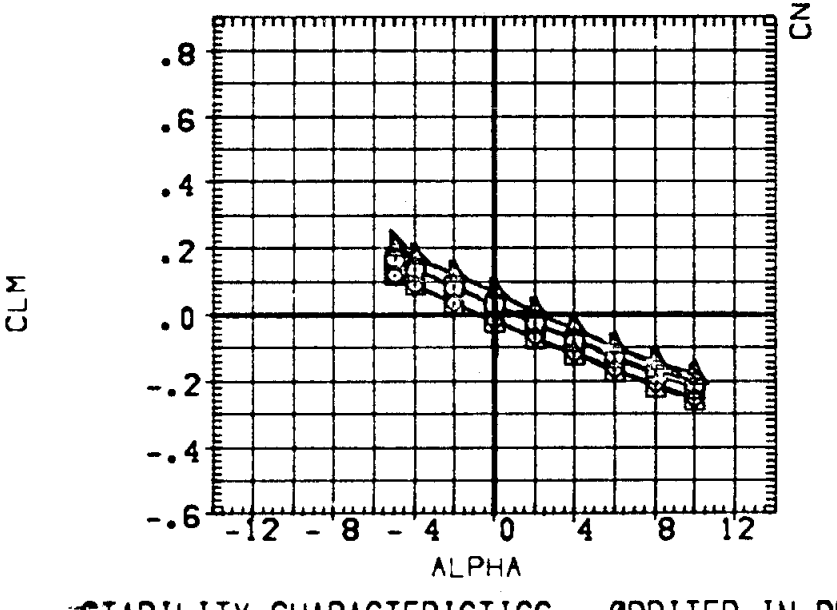
(E)MACH = 1.46

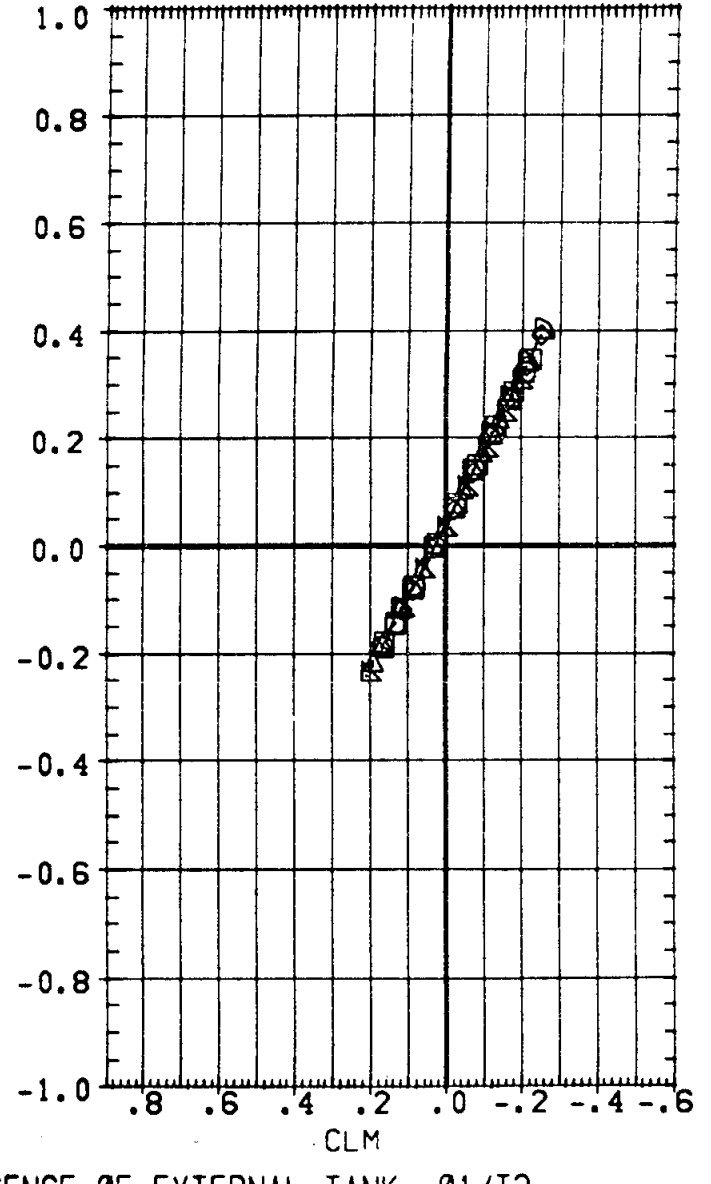
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72002)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72003)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72004)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72005)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72006)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3280.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

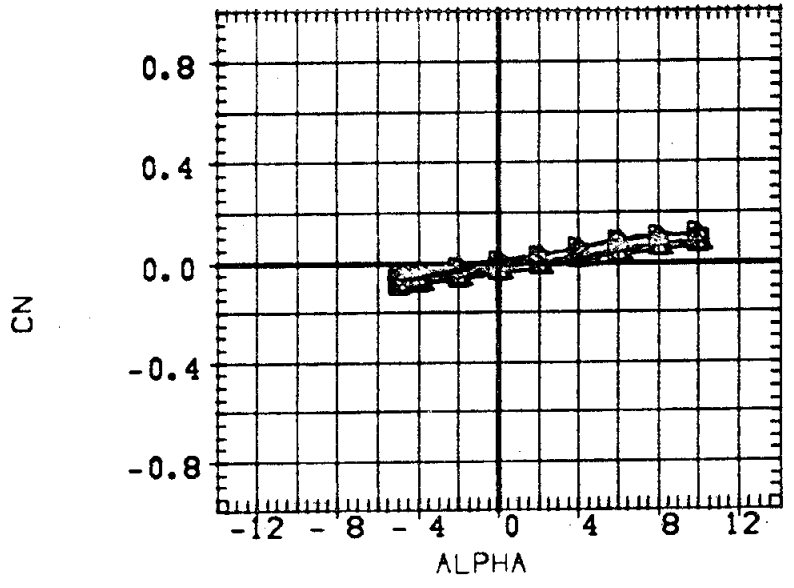
(F)MACH = 1.95

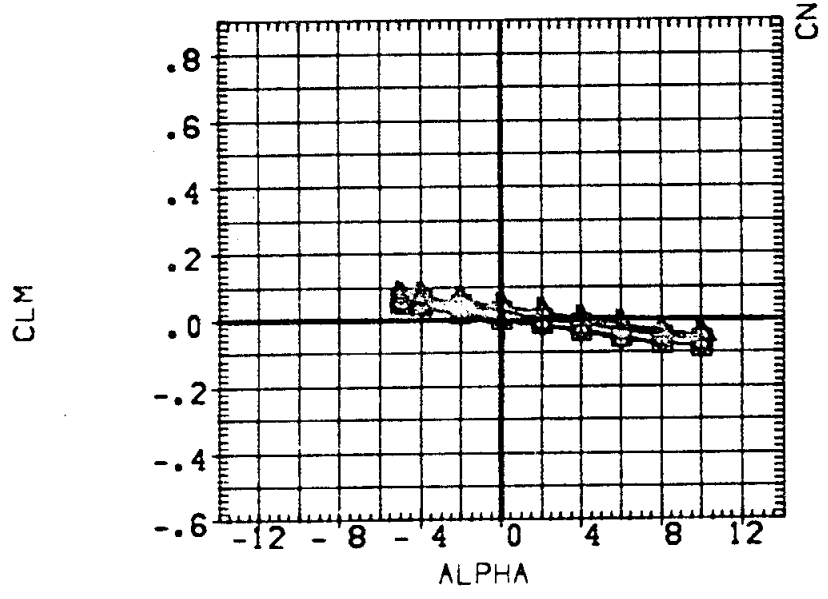
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72002)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72003)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72004)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72005)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72006)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)

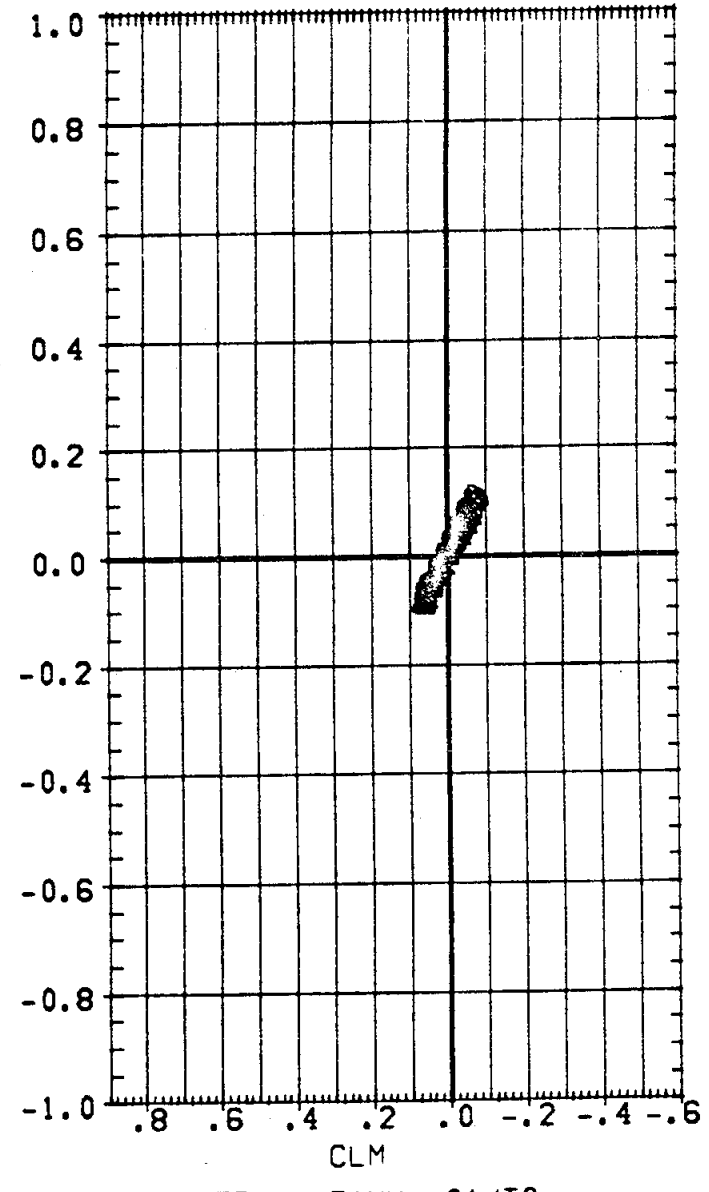
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

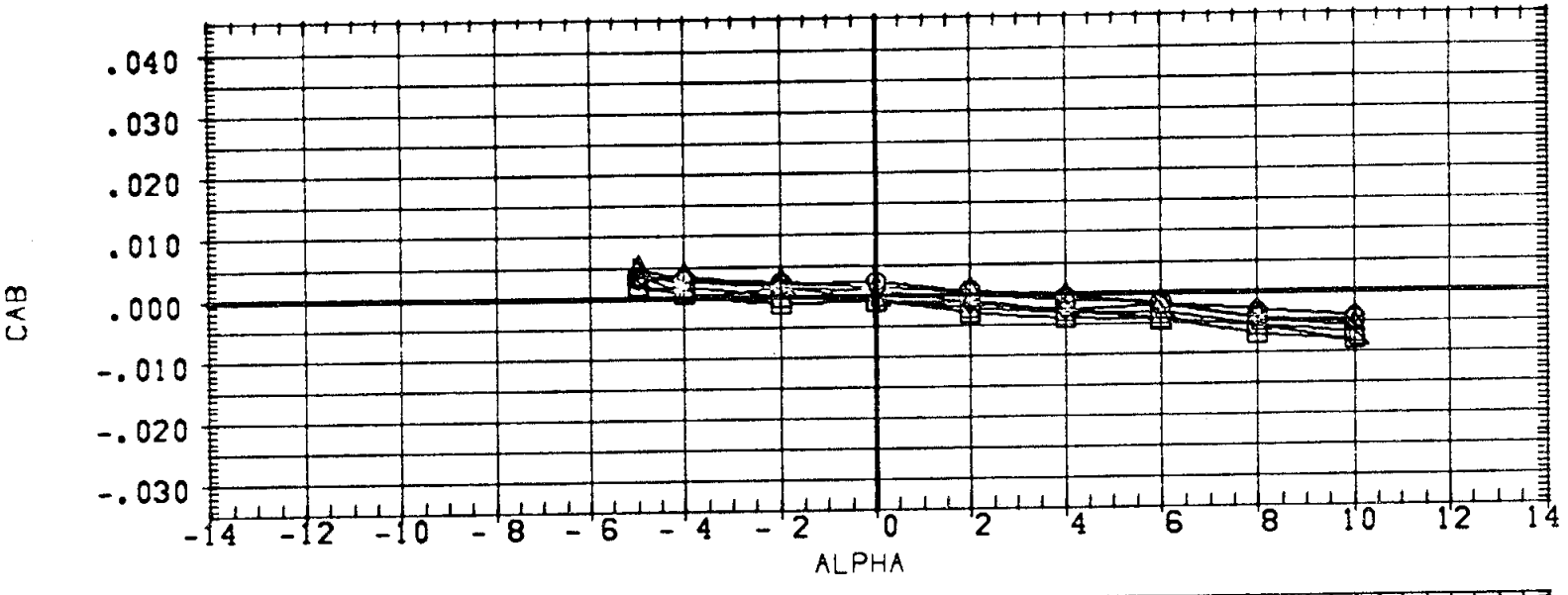
(G)MACH = 4.96

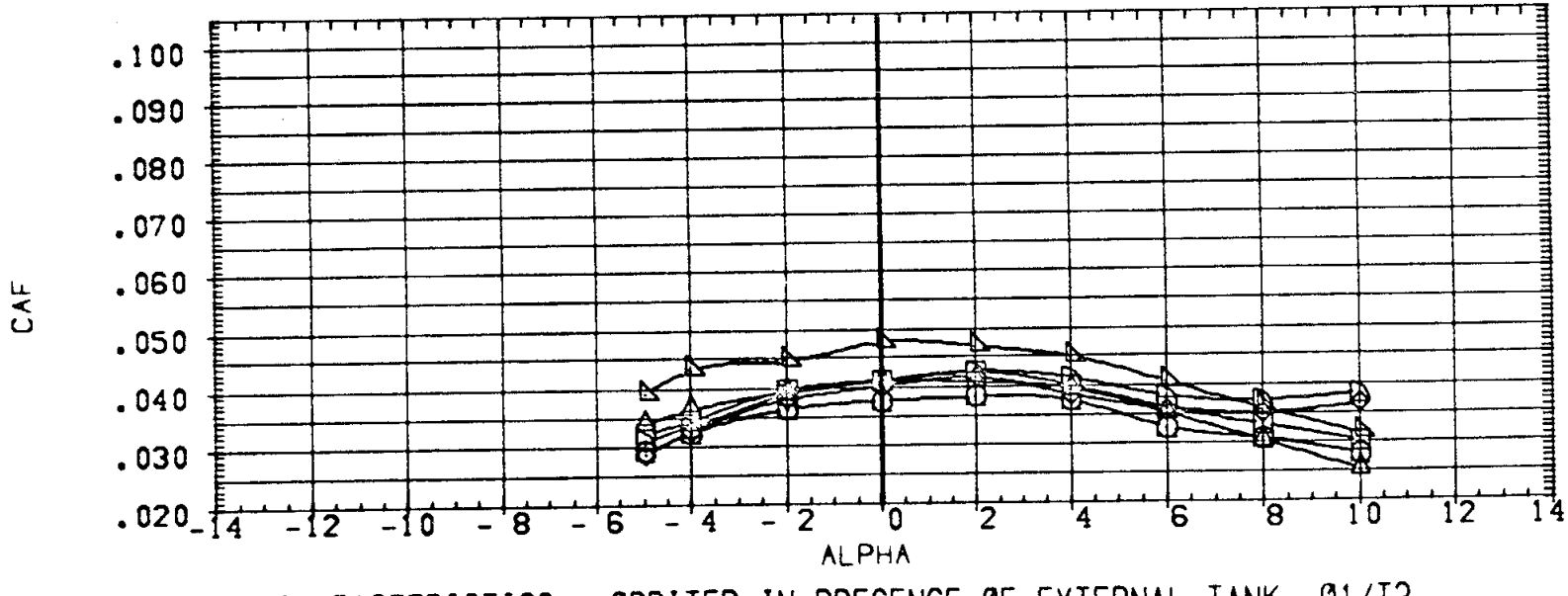
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72002)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72003)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72004)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72005)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72006)	⊠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





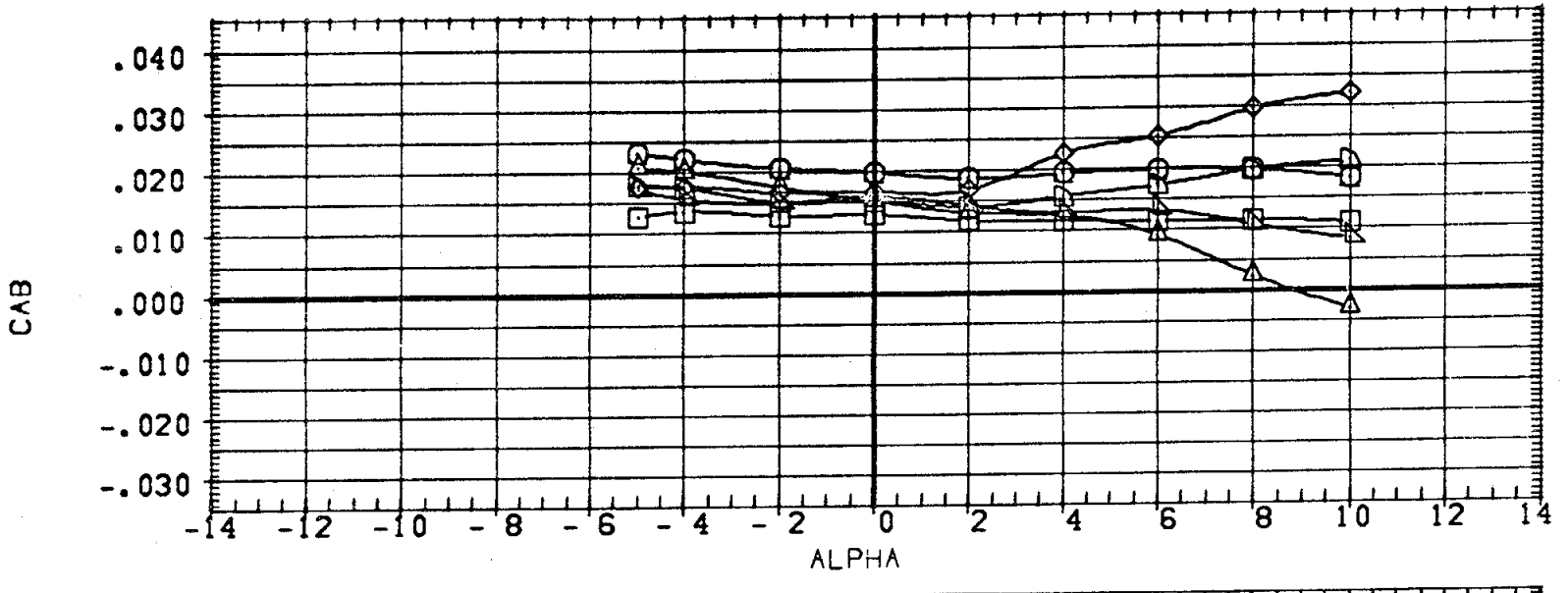
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

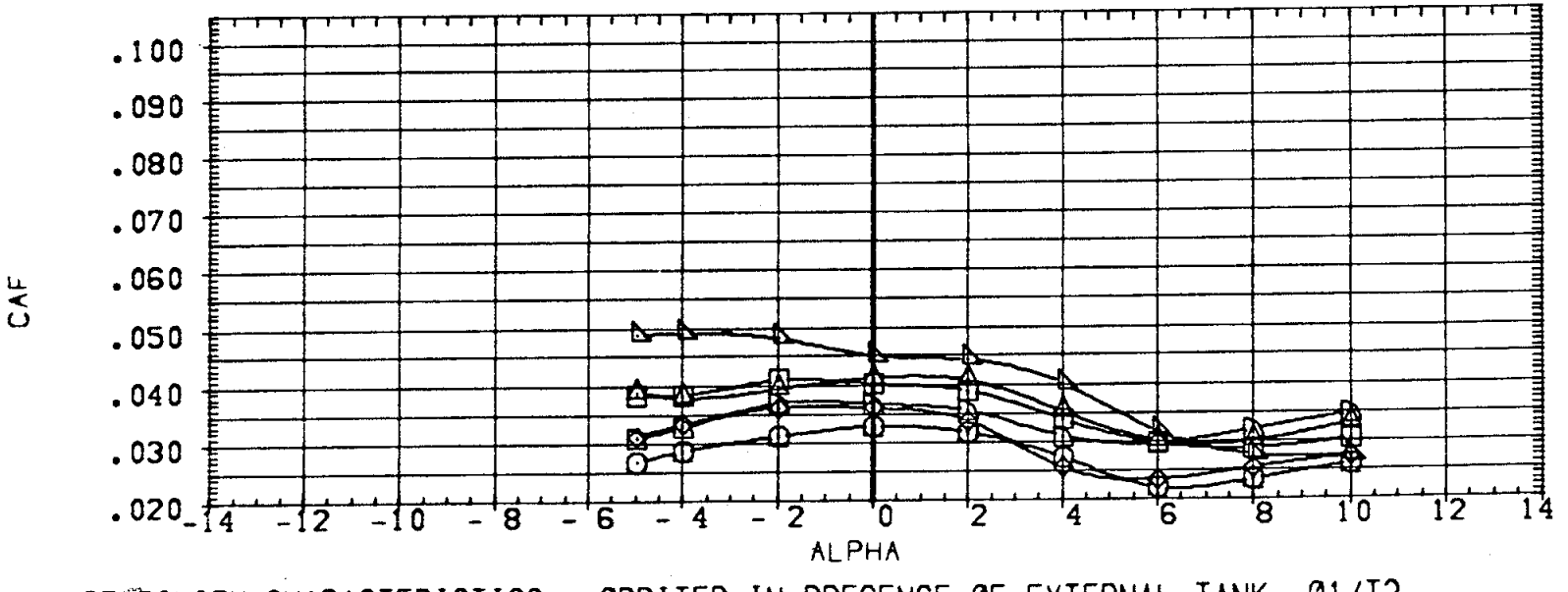
(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72002)	⊠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72003)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72004)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.240	10.000	
(A72005)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.240	10.000	
(A72006)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.240	10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



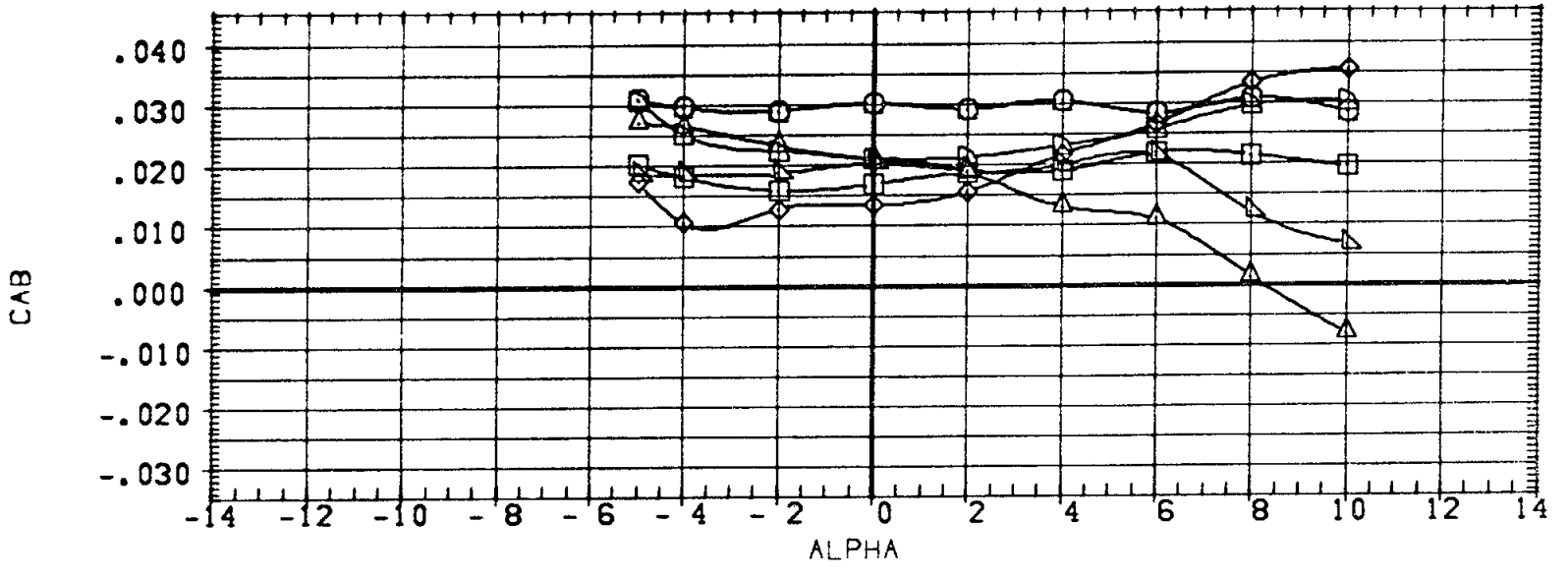


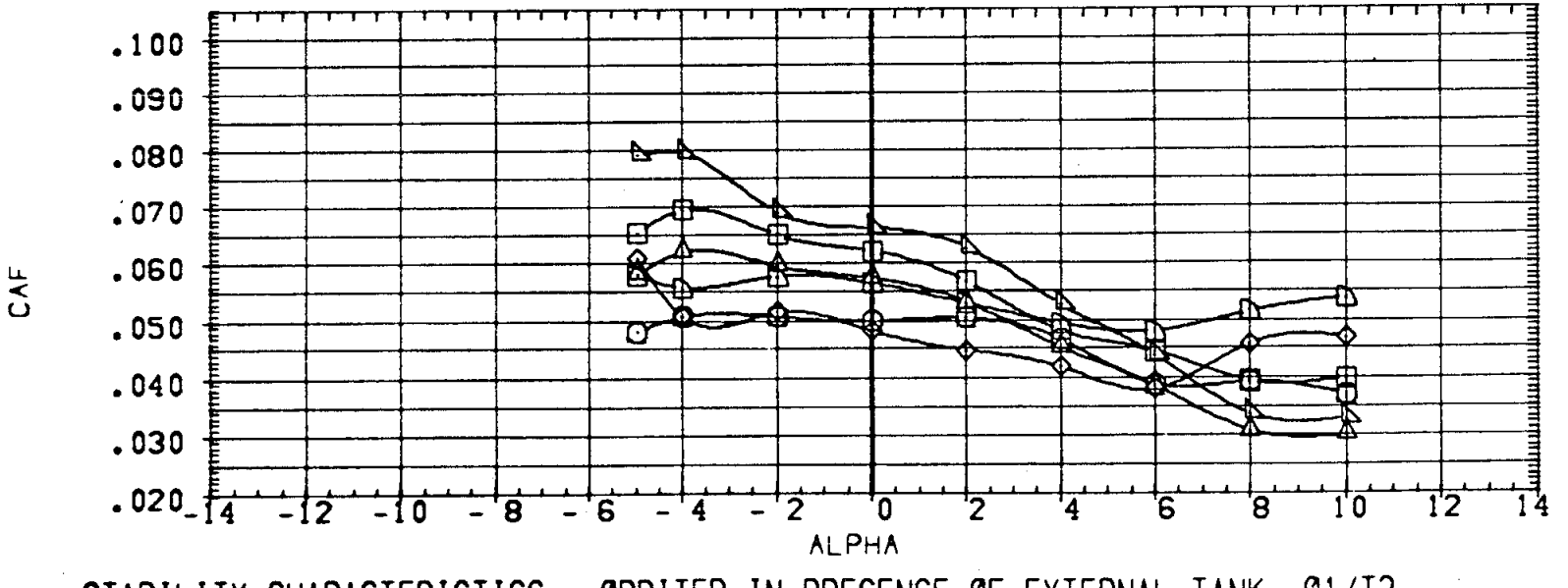
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.120	10.000	
(A72002)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.120	10.000	
(A72003)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.120	10.000	
(A72004)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.240	10.000	
(A72005)	⬠	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.240	10.000	
(A72006)	⬡	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



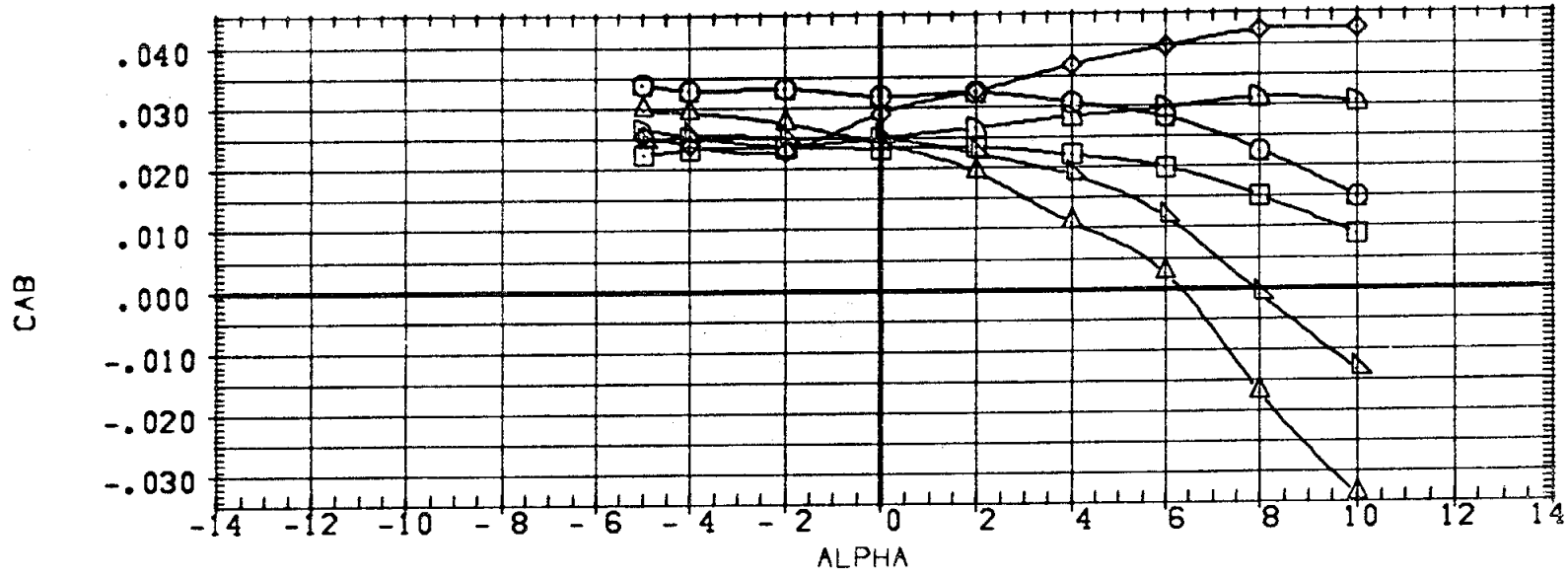


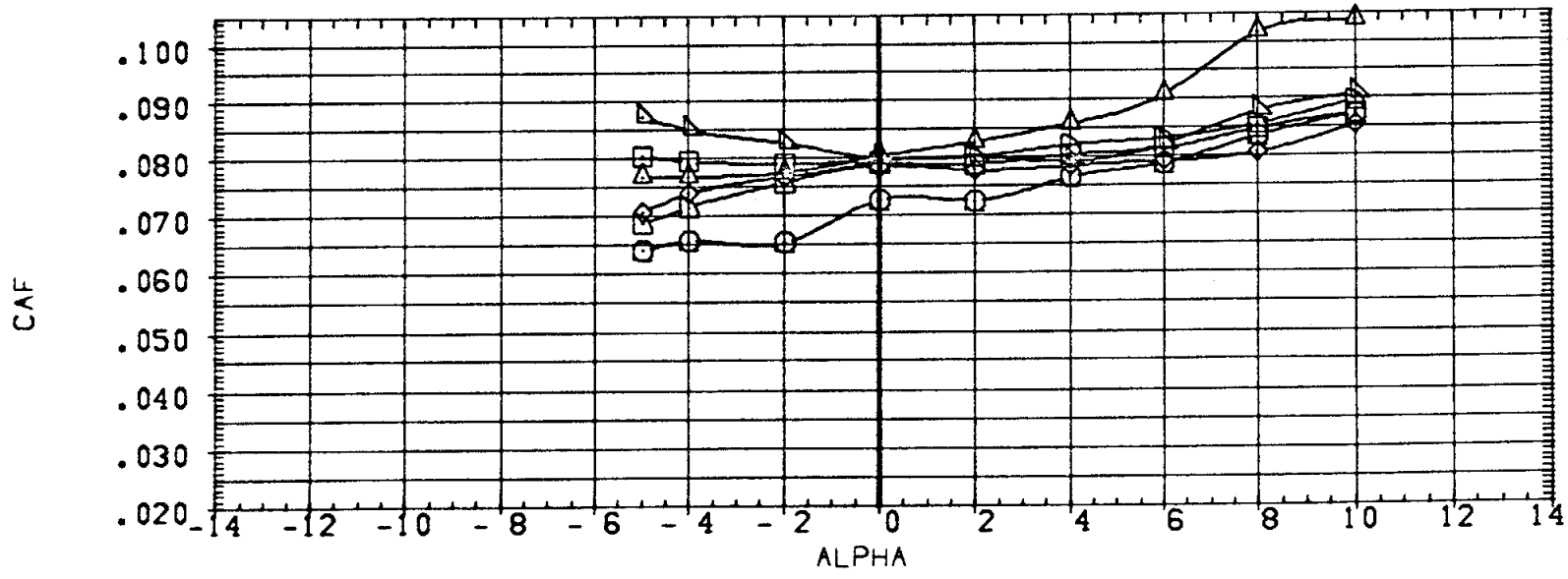
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.120	10.000	
(A72002)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.120	10.000	
(A72003)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.120	10.000	
(A72004)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.240	10.000	
(A72005)	▽	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.240	10.000	
(A72006)	⬠	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



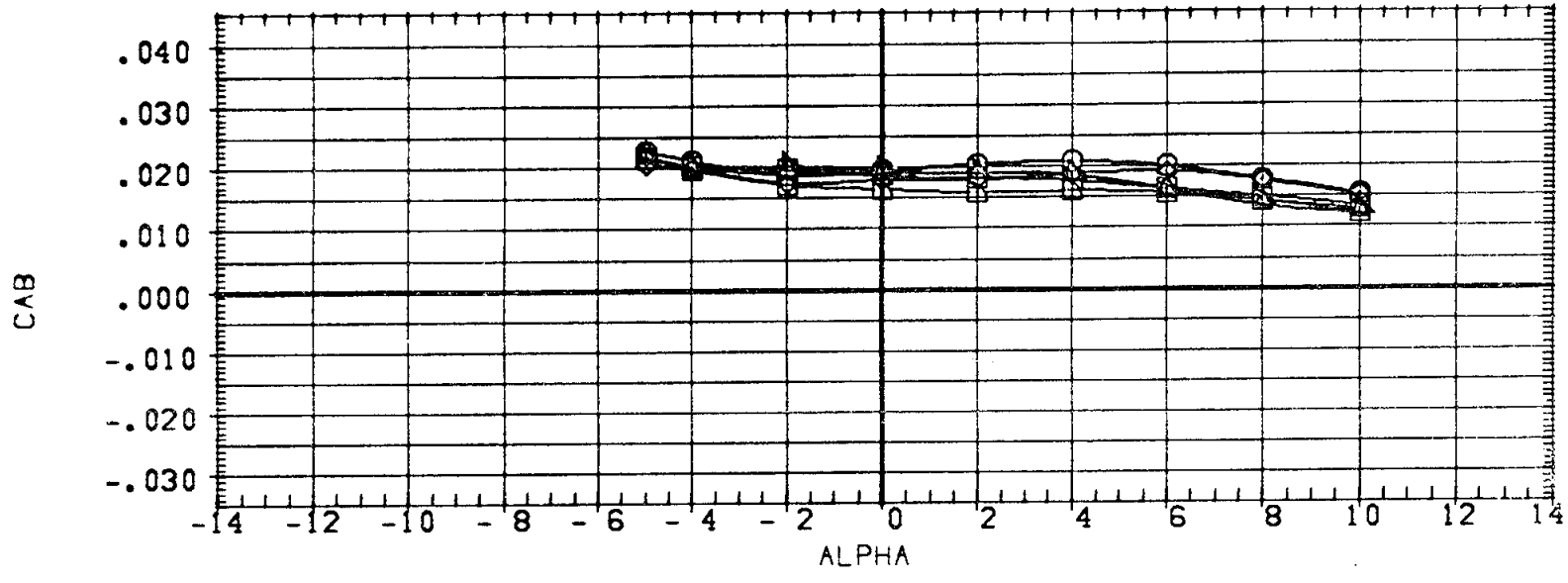


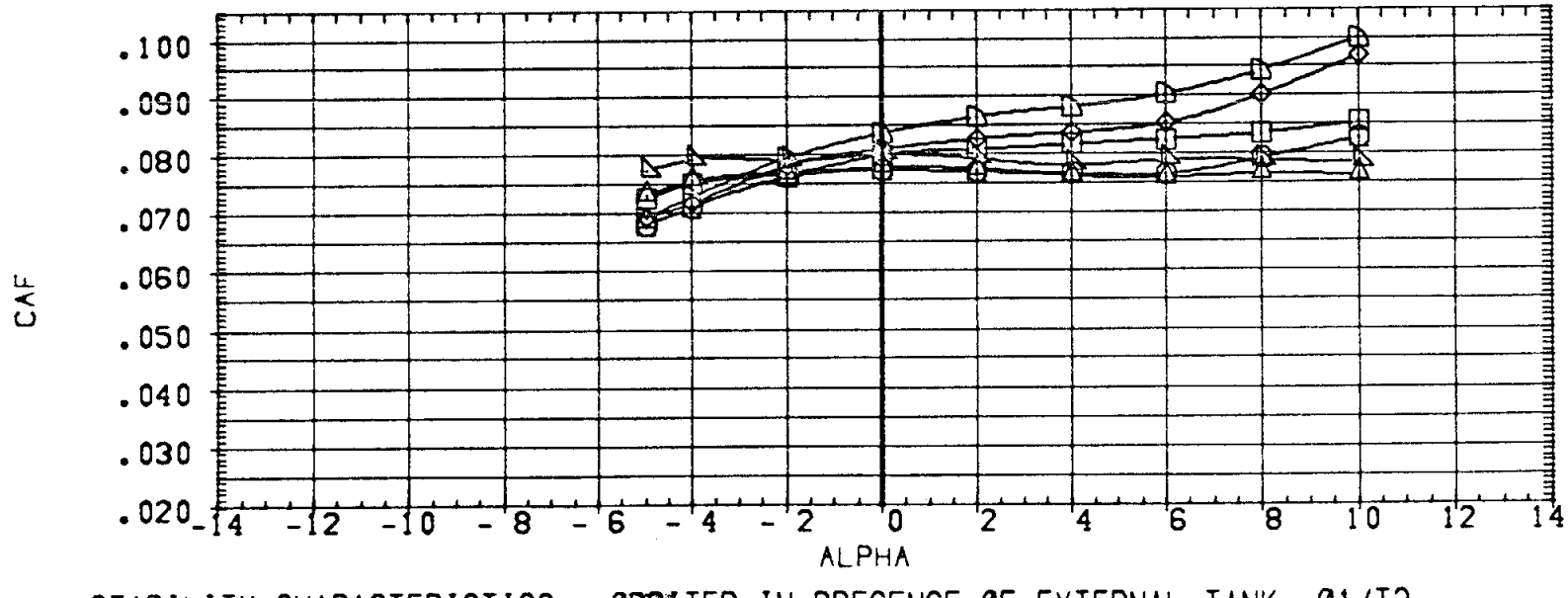
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

(O)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72002)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72003)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72004)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.240	10.000	
(A72005)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.240	10.000	
(A72006)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



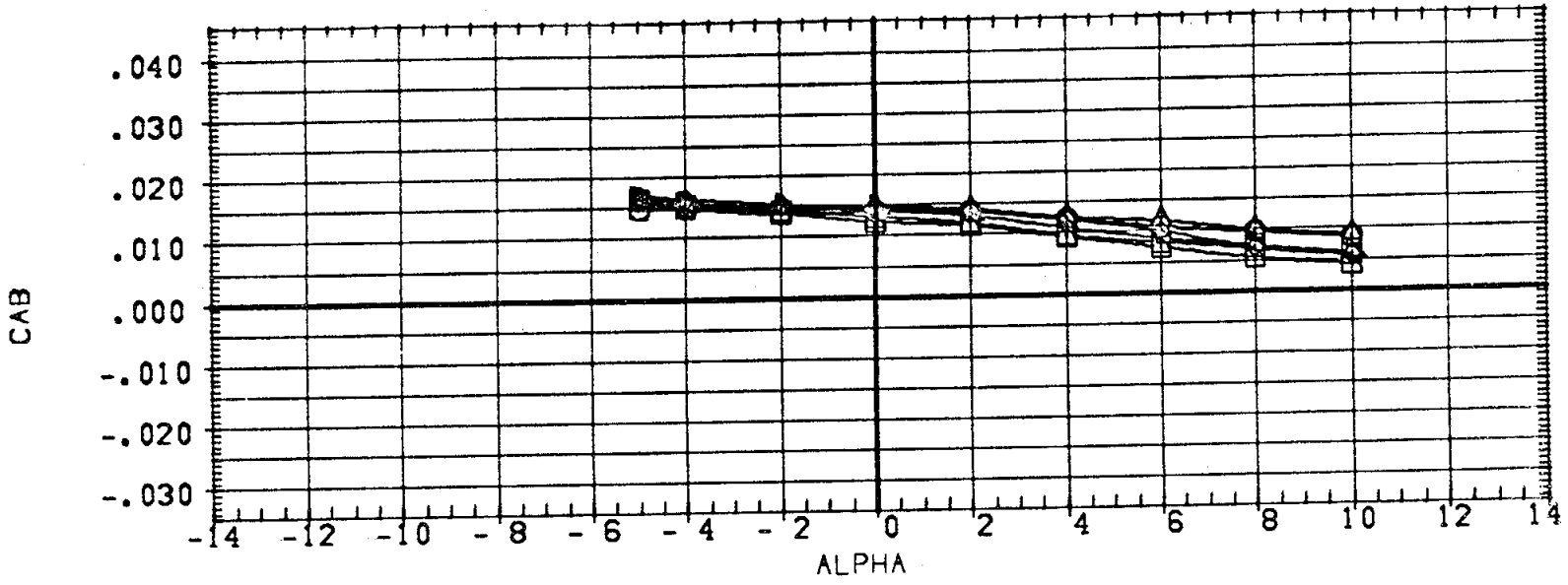


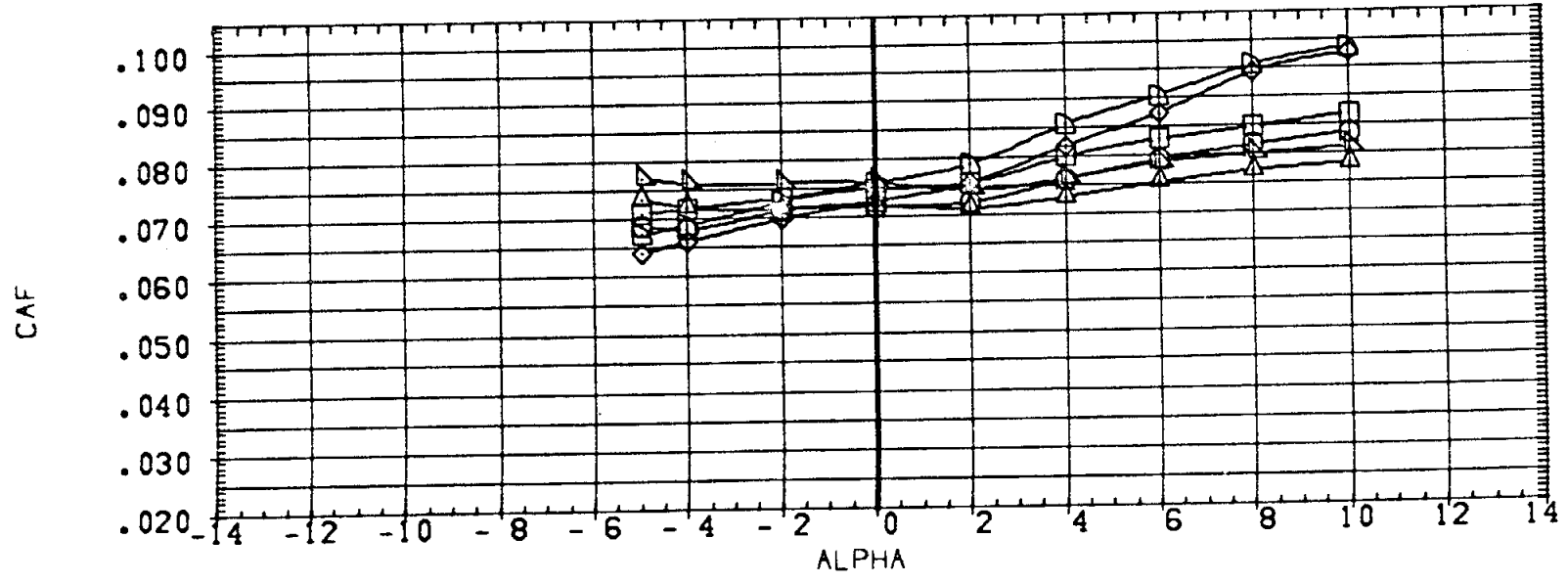
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.120	10.000	
(A72002)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.120	10.000	
(A72003)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.120	10.000	
(A72004)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.240	10.000	
(A72005)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.240	10.000	
(A72006)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



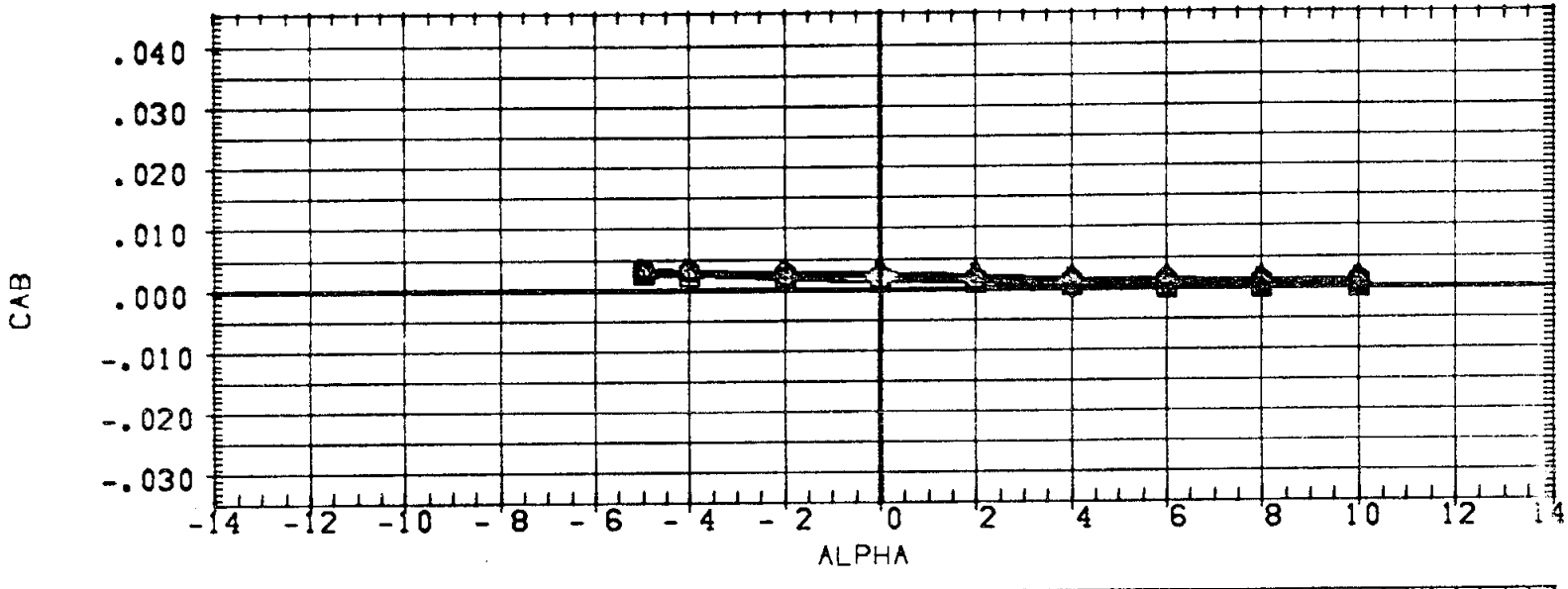


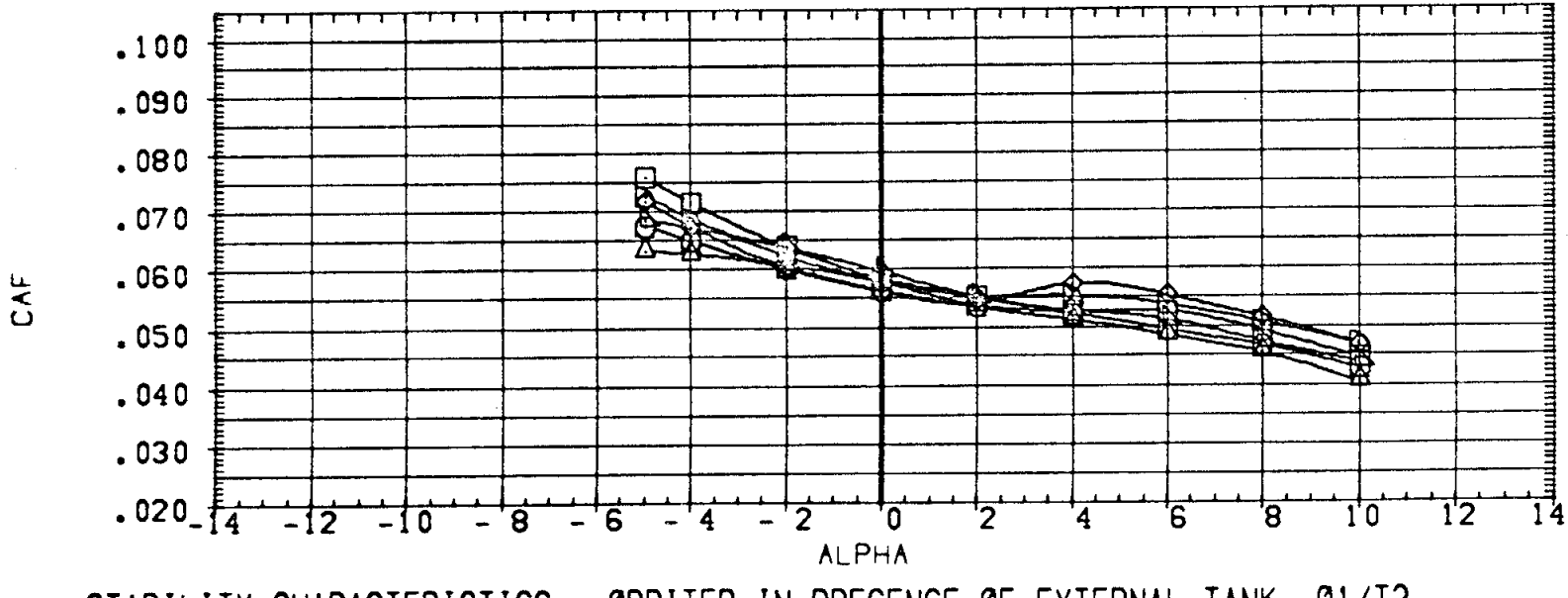
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

(F)MACH = 1.95

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.120	10.000	
(A72002)	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.120	10.000	
(A72003)	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.120	10.000	
(A72004)	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.240	10.000	
(A72005)	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.240	10.000	
(A72006)	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



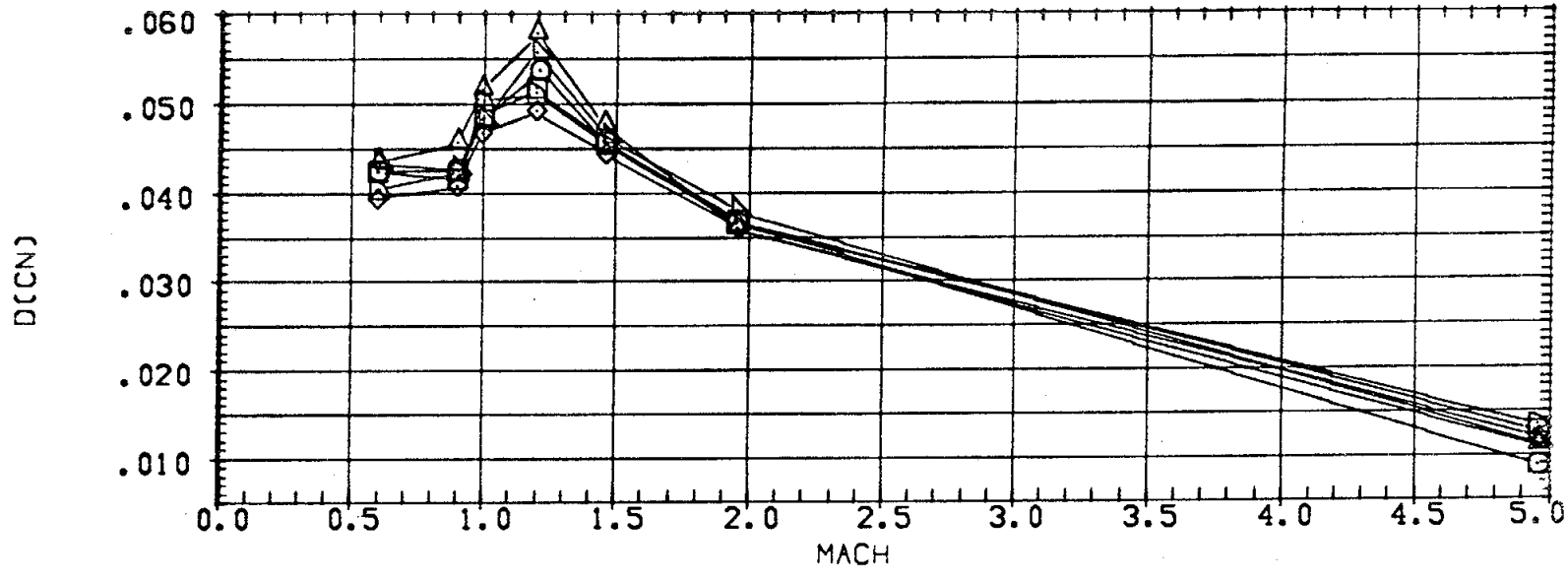


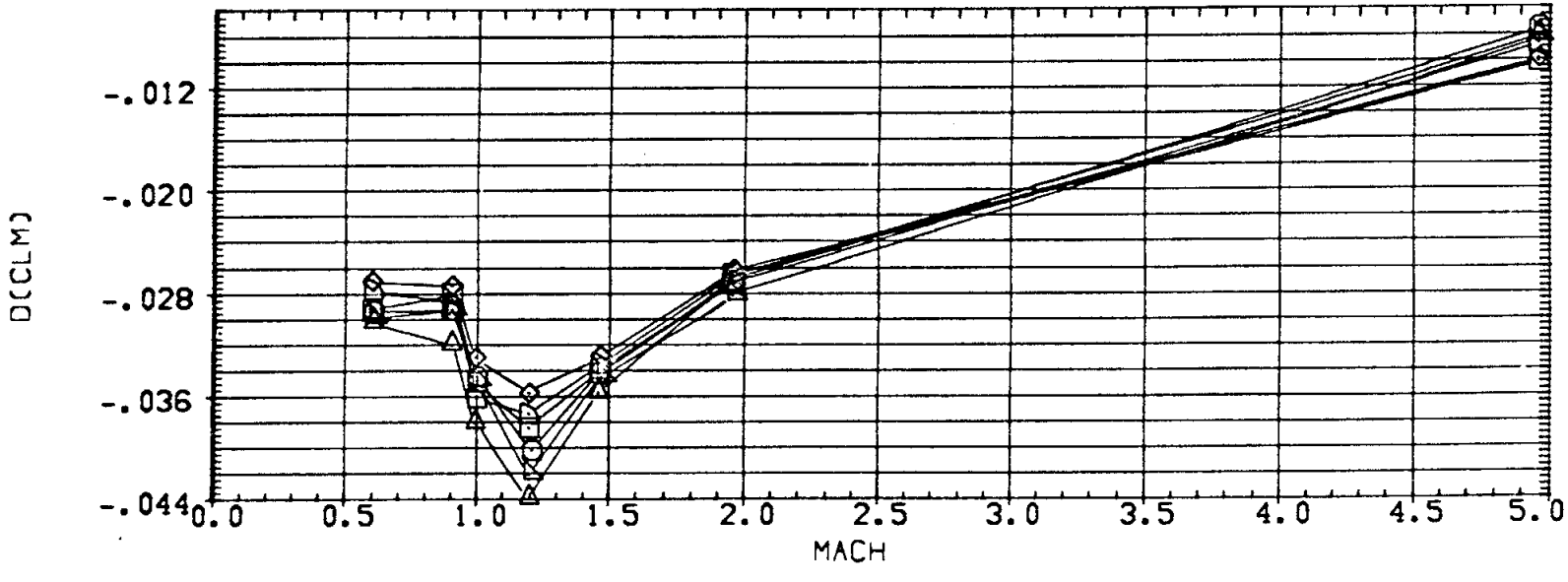
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872001)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.120	10.000	
(872002)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.120	10.000	
(872003)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.120	10.000	
(872004)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	.000	.240	10.000	
(872005)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	-1.200	.240	10.000	
(872006)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



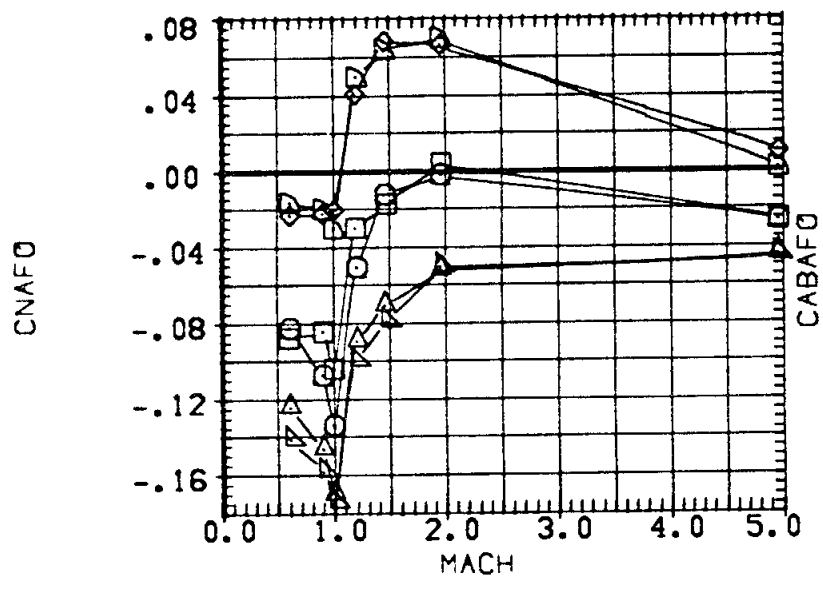


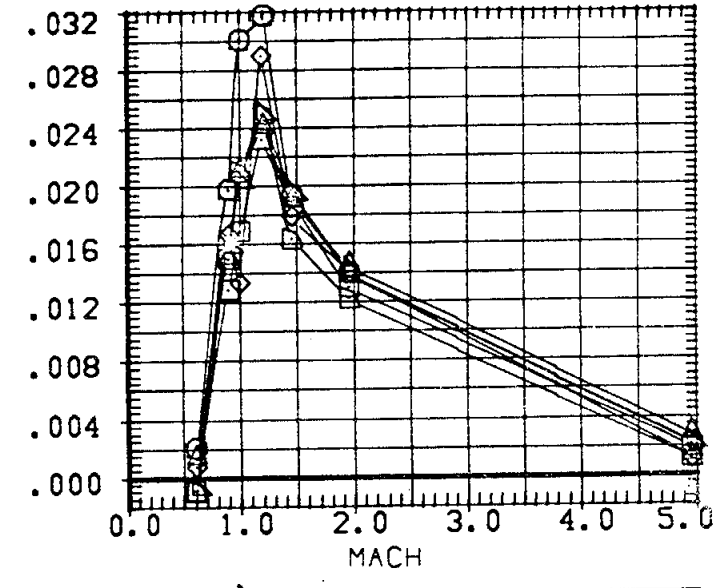
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

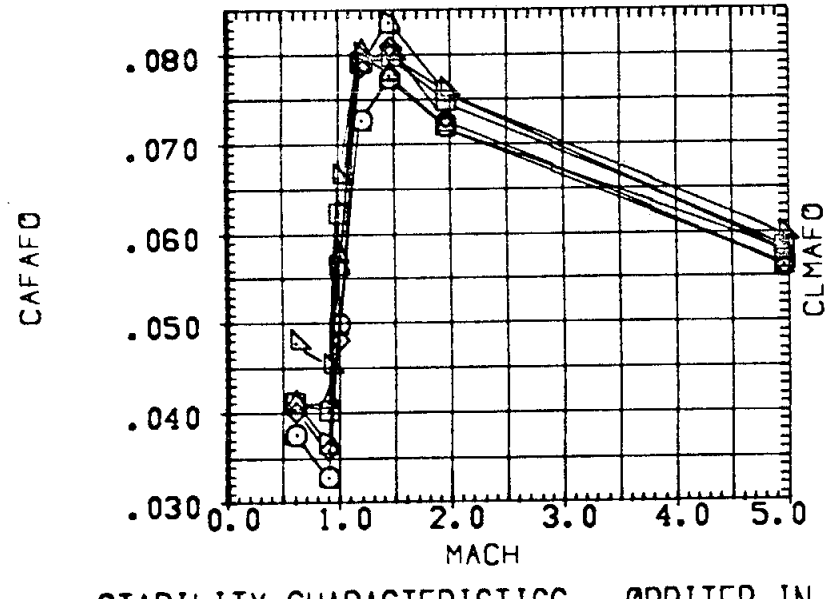
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(872001)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(872002)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(872003)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(872004)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(872005)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)
(872006)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)

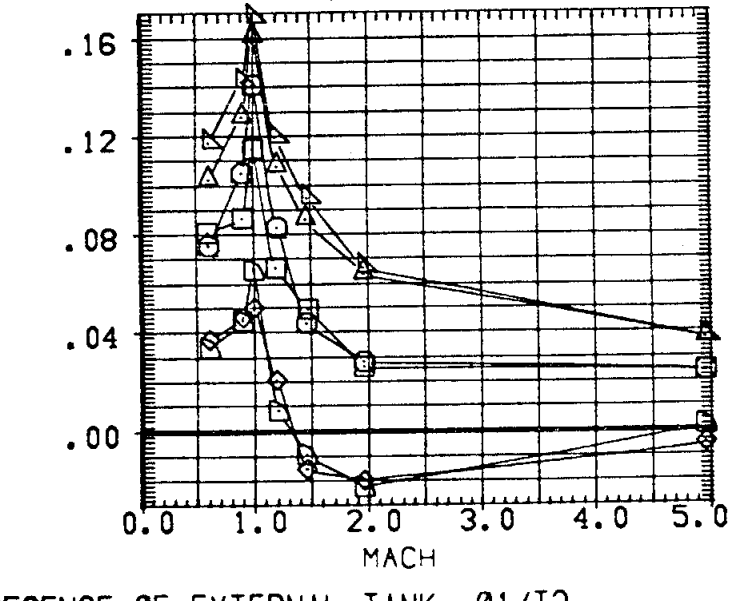
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







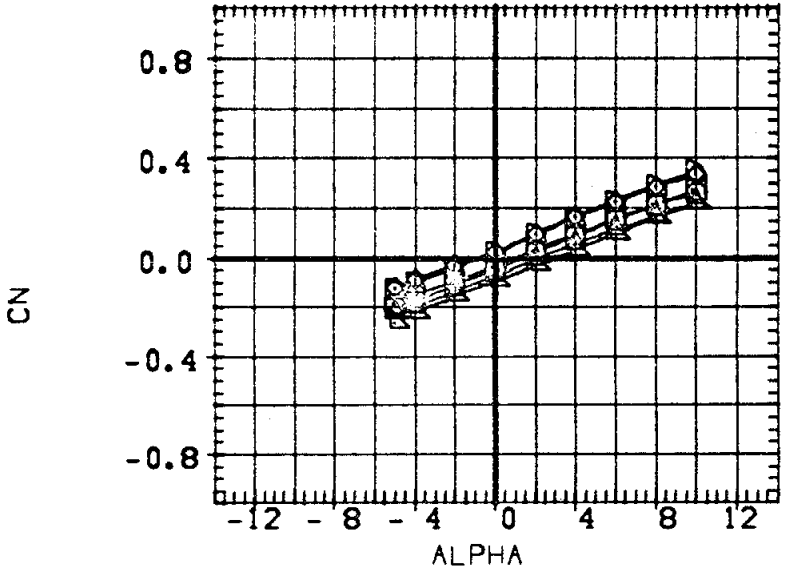


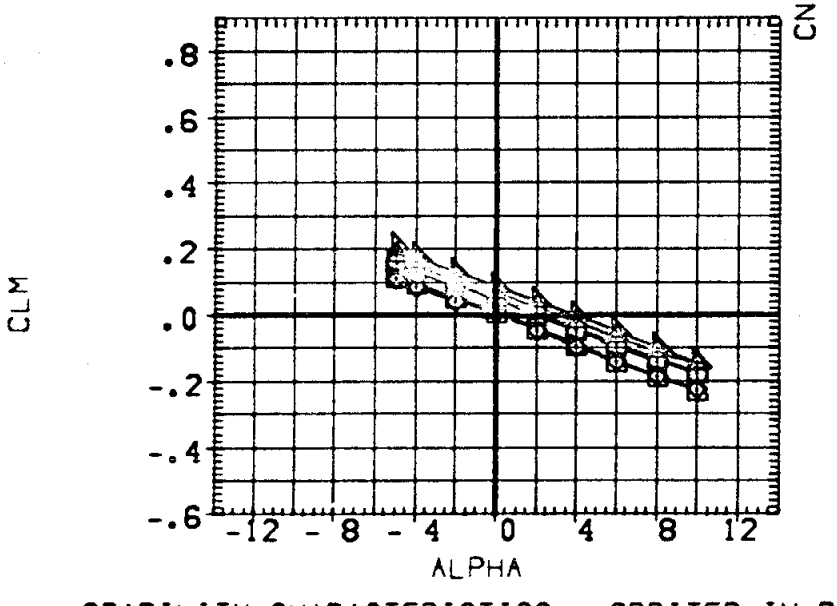
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

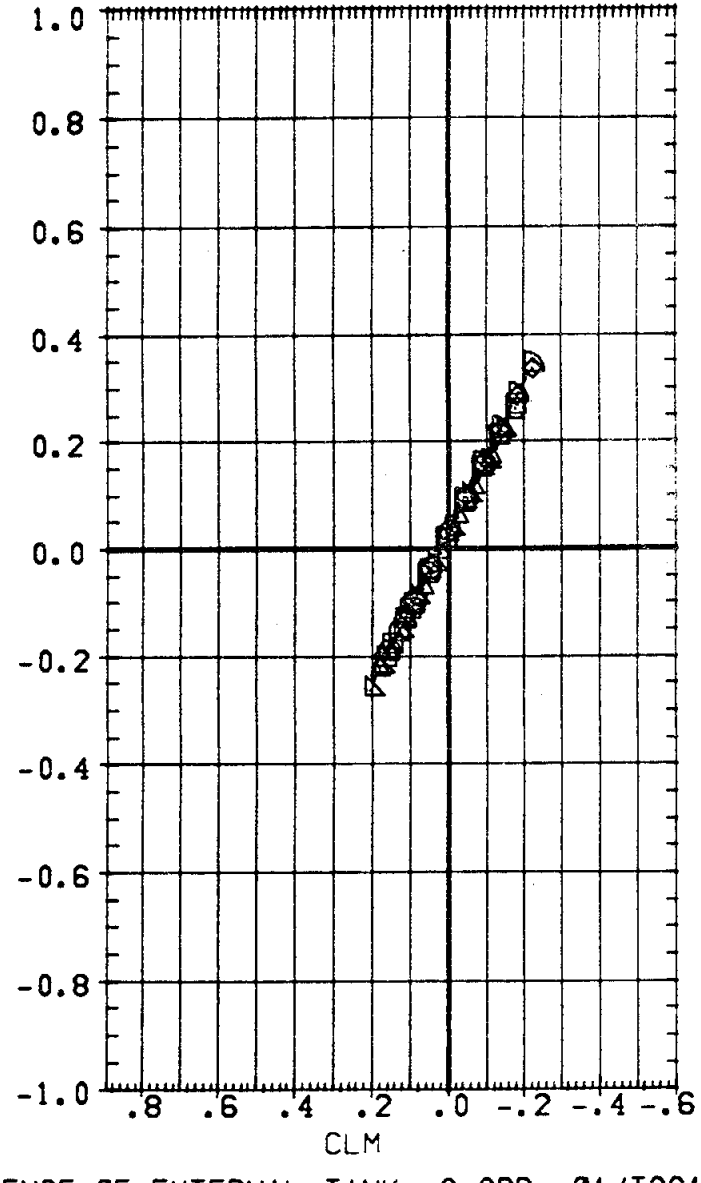
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72008)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)
(A72009)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)
(A72010)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)
(A72011)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)
(A72012)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)
(A72013)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







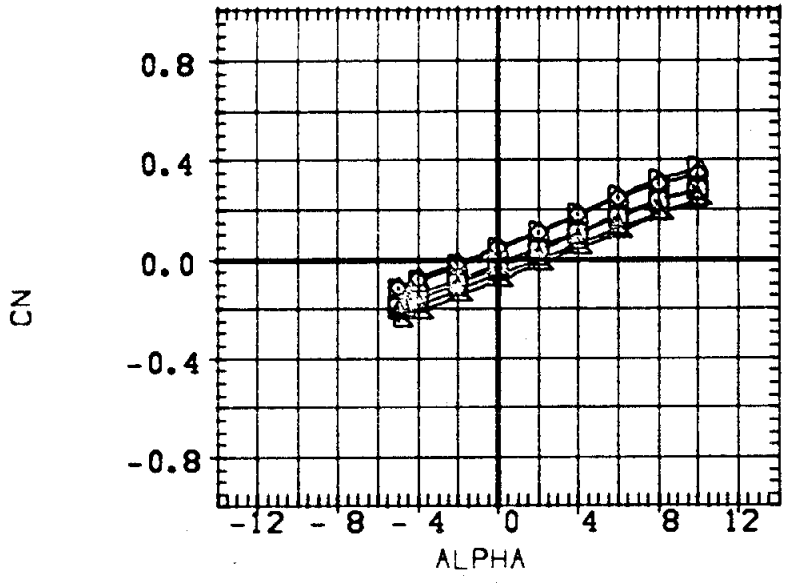
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

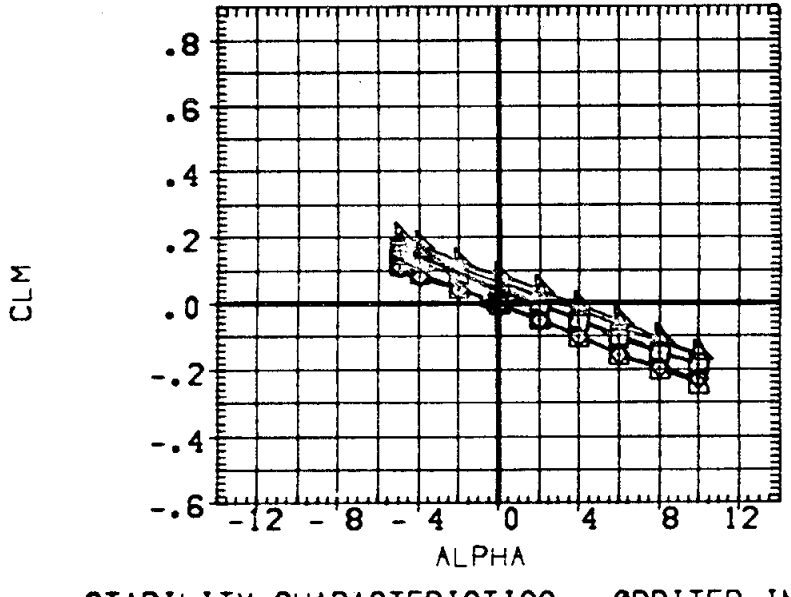
(A)MACH = .60

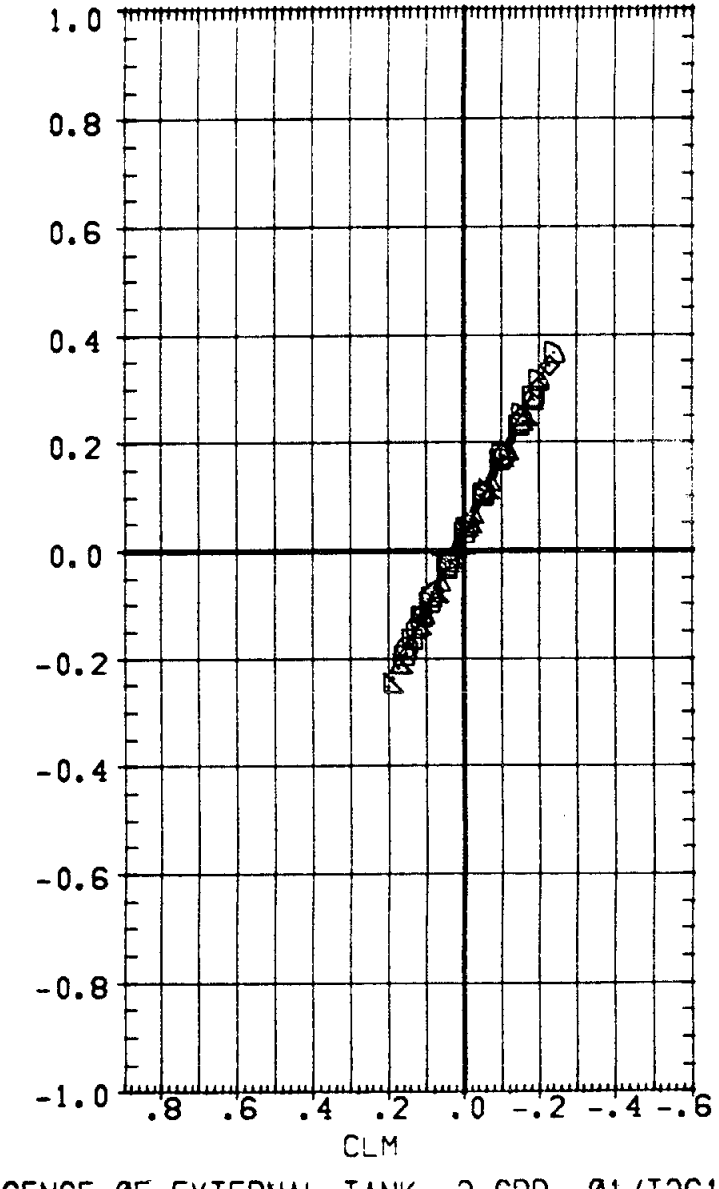
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72008)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72009)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72010)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72011)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72012)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72013)	⊠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





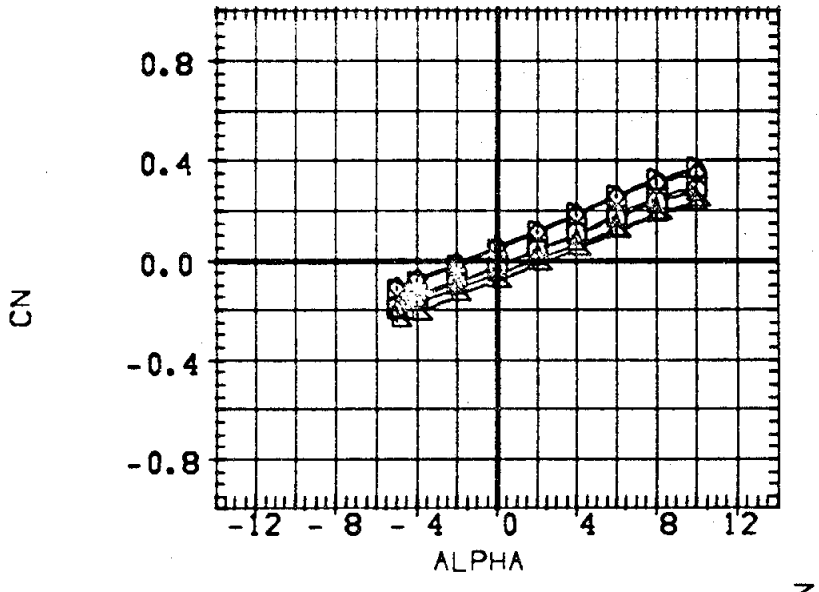


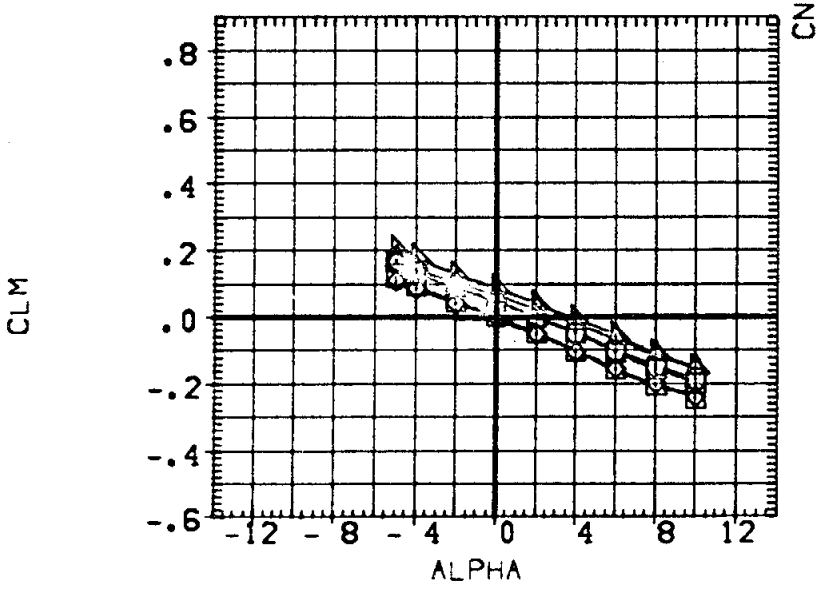
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

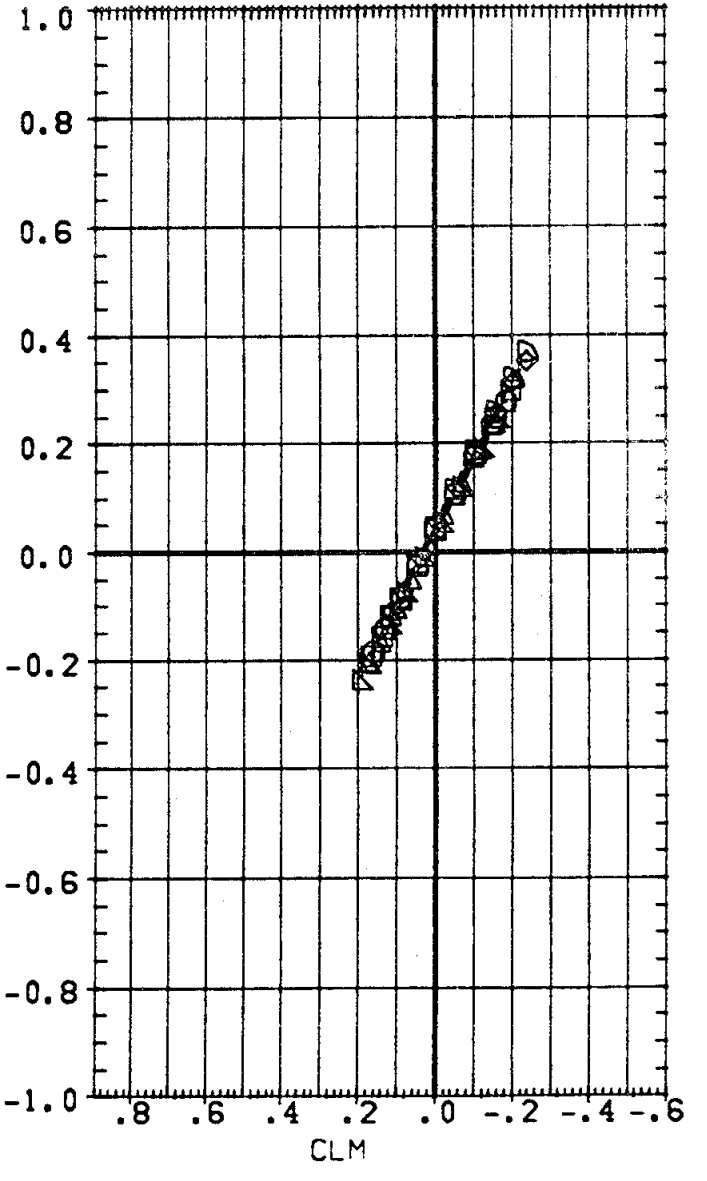
(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72008)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.600	.000
(A72009)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.240	10.000	.000
(A72012)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1526.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







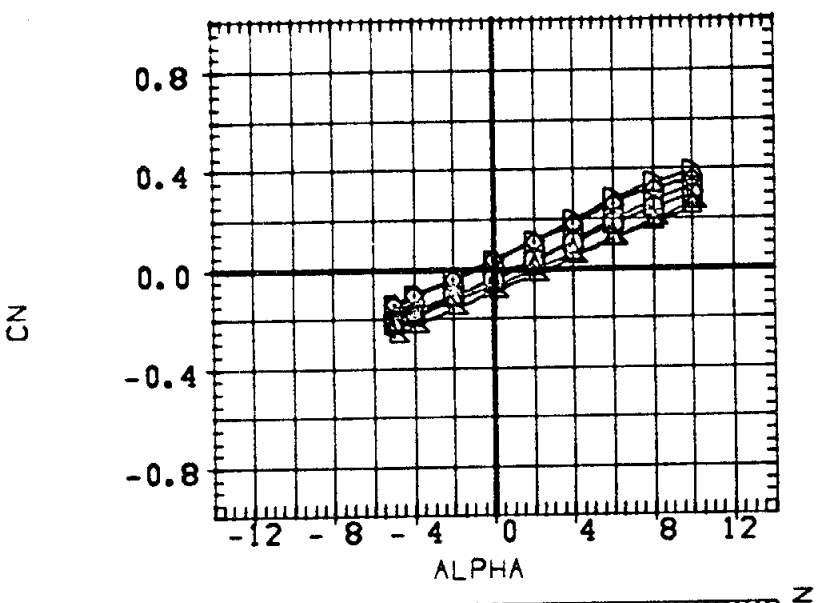
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

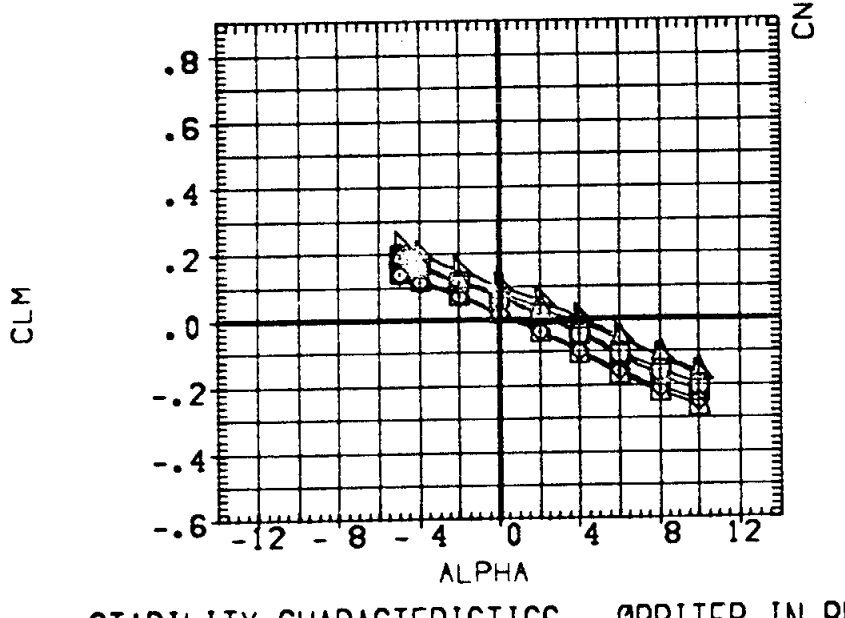
(C)MACH = .90

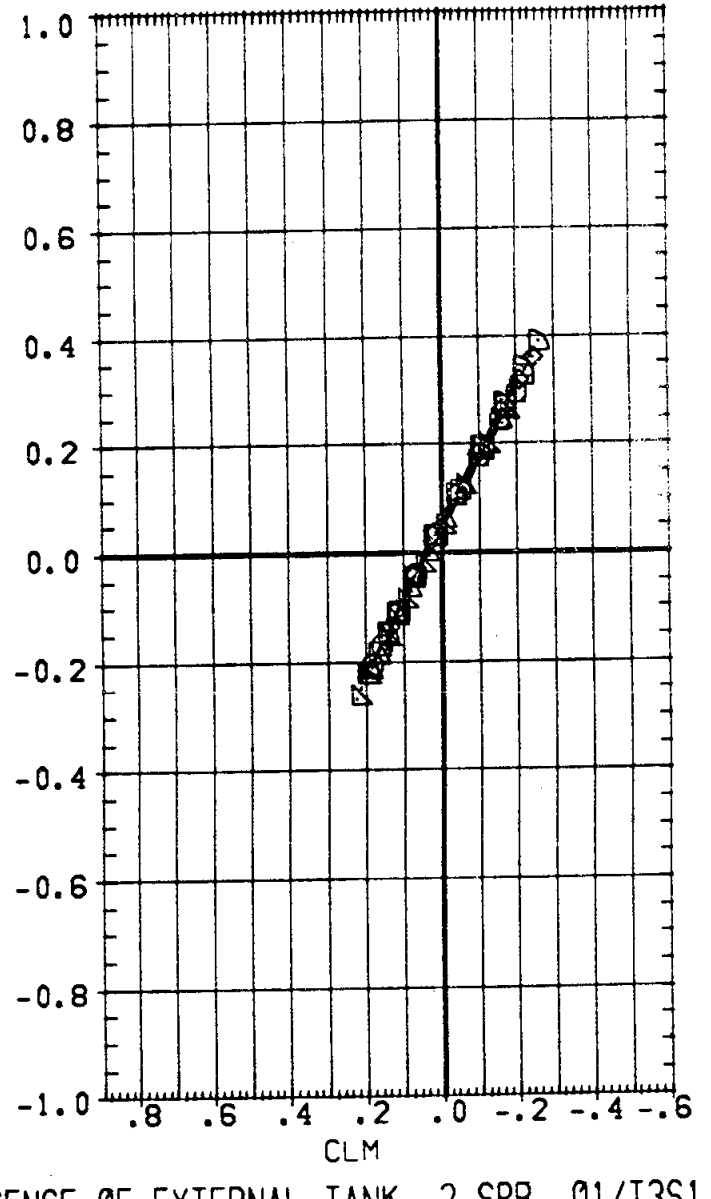
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72006)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72008)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72010)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72011)	○	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72012)	▽	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72013)	⬡	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







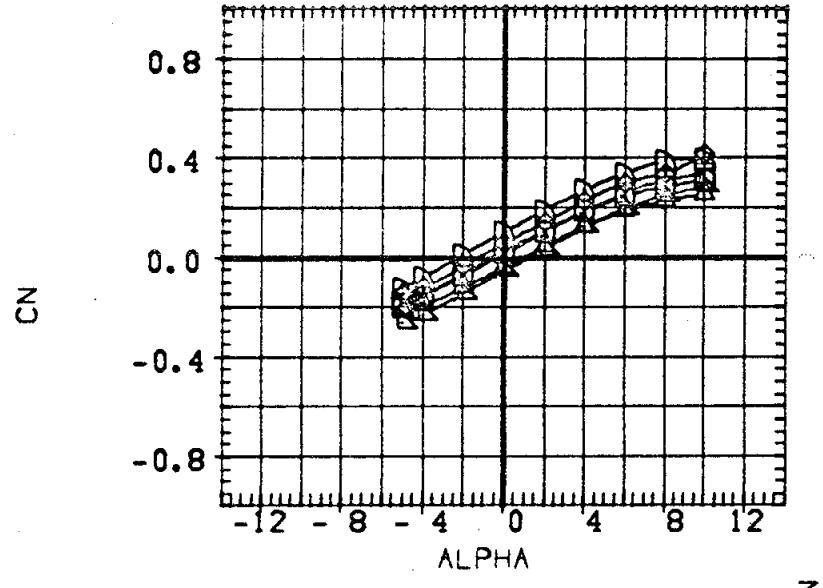
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

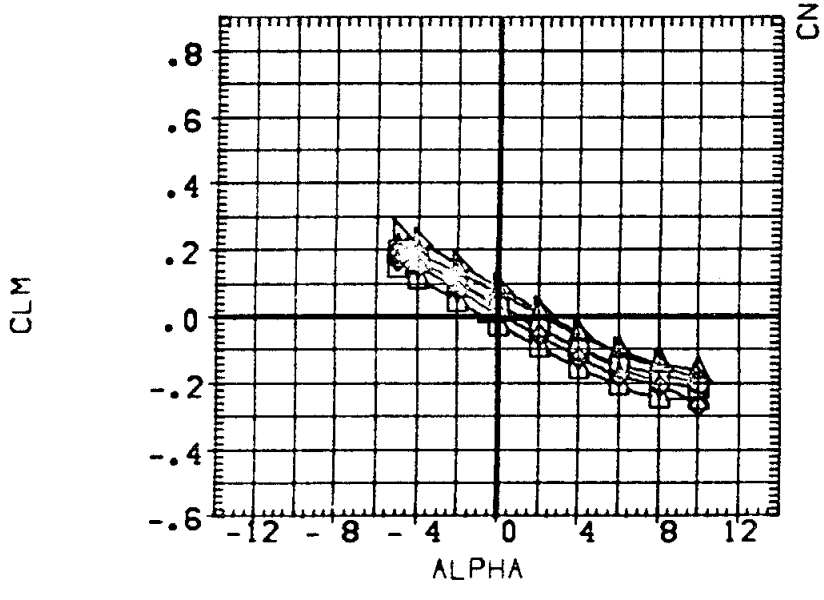
(D)MACH = 1.00

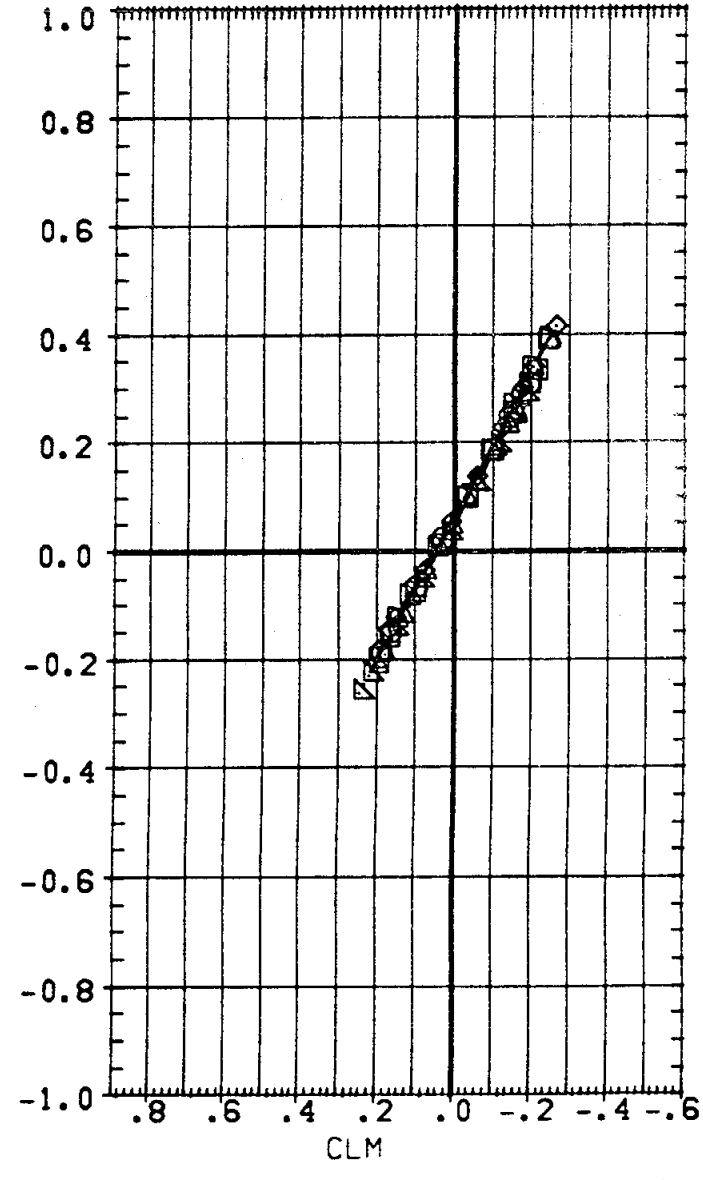
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72008)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72011)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72012)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72013)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1526.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







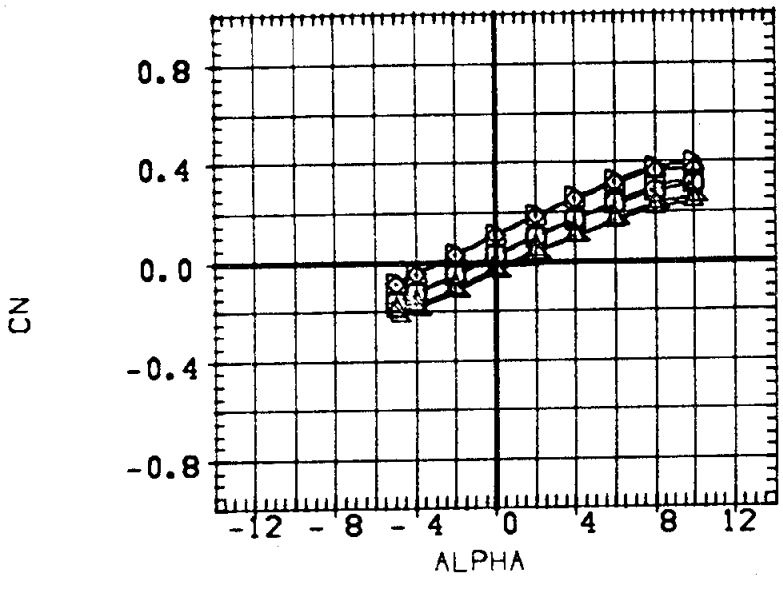
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

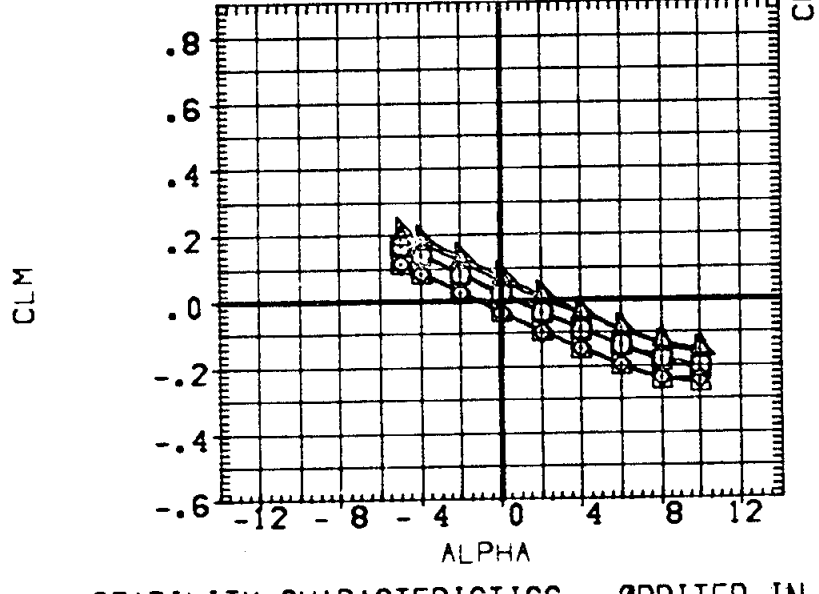
(E)MACH = 1.20

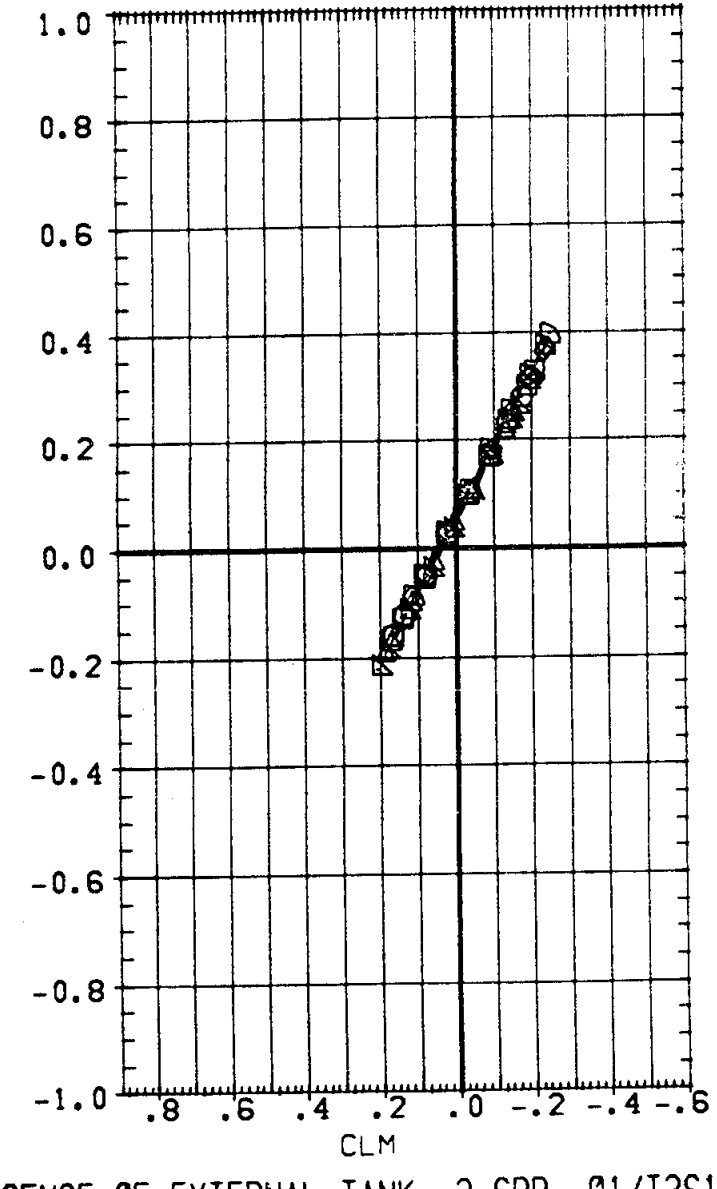
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72008)	▽	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72009)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72010)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72011)	○	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72012)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72013)	⬡	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





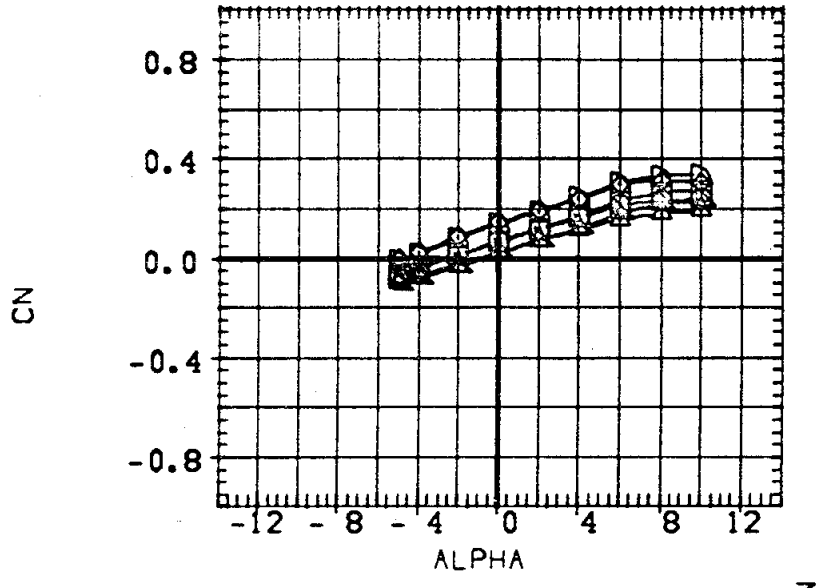


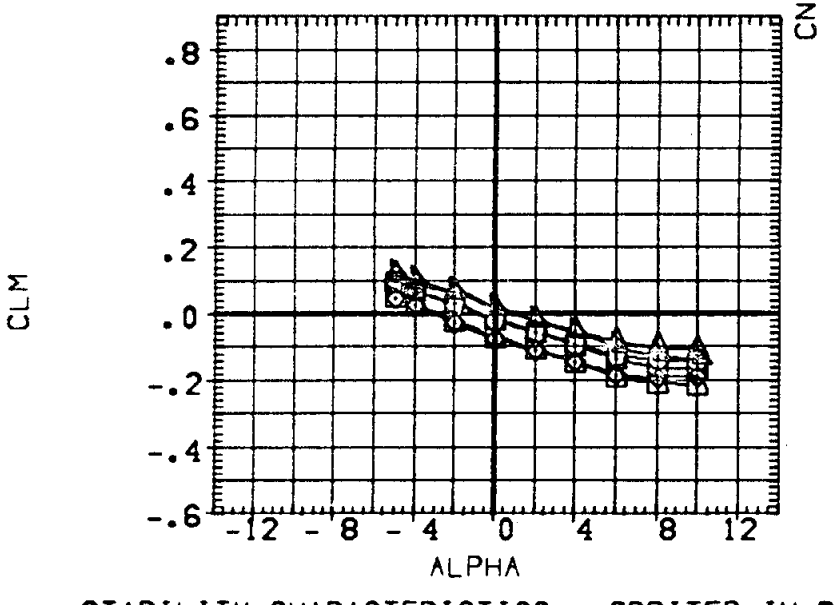
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

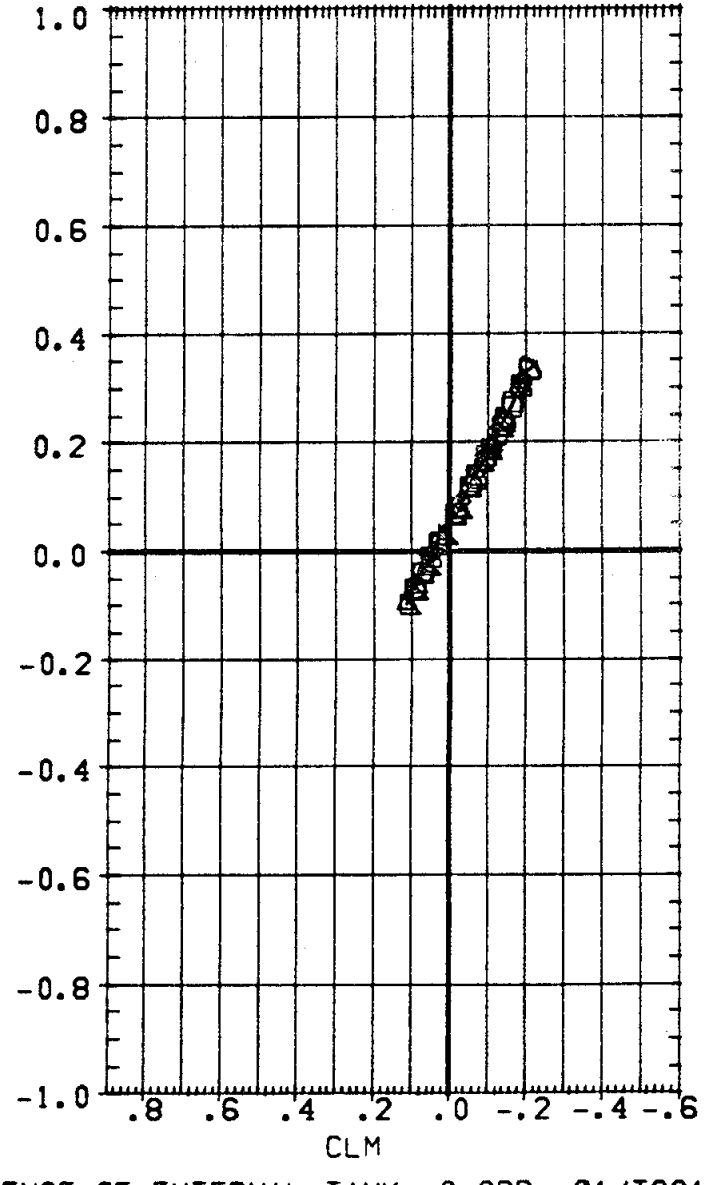
(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72008)	○	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	.000
(A72009)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.240	10.000	.000
(A72012)	▽	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)	⊲	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







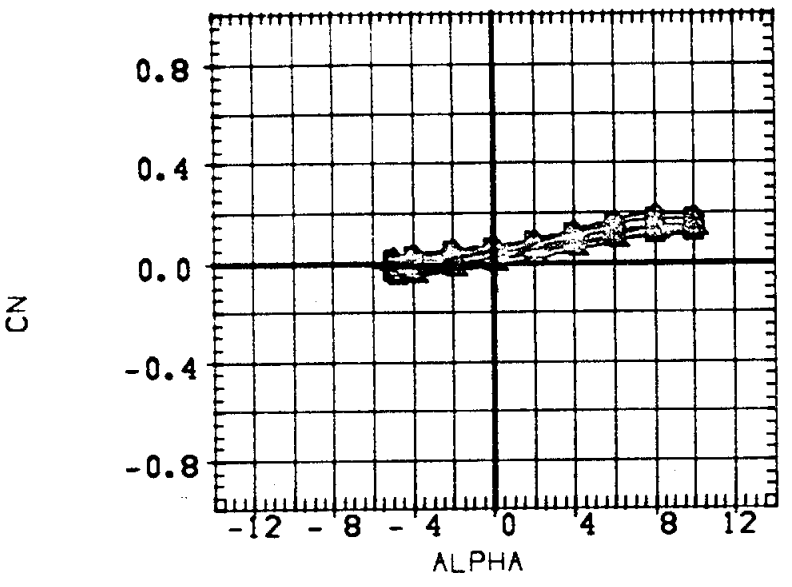
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

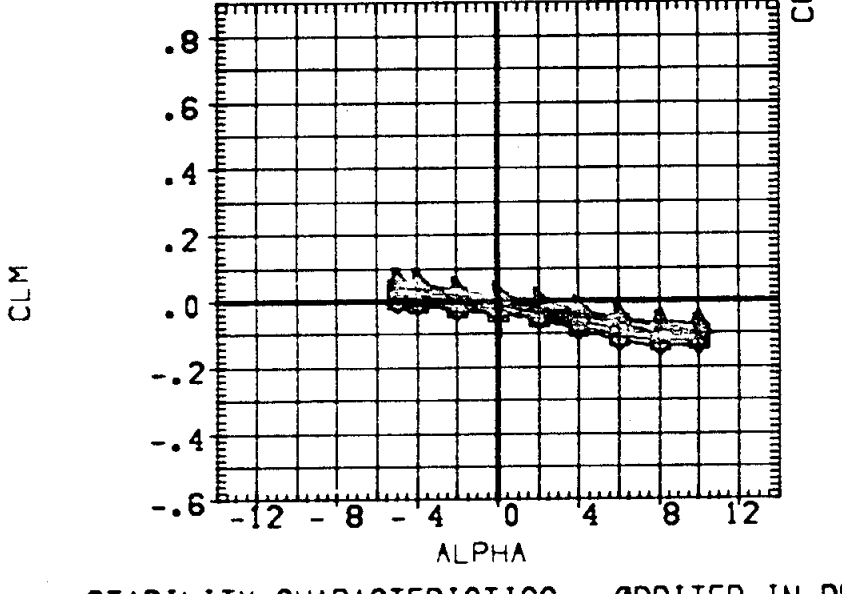
(G)MACH = 1.96

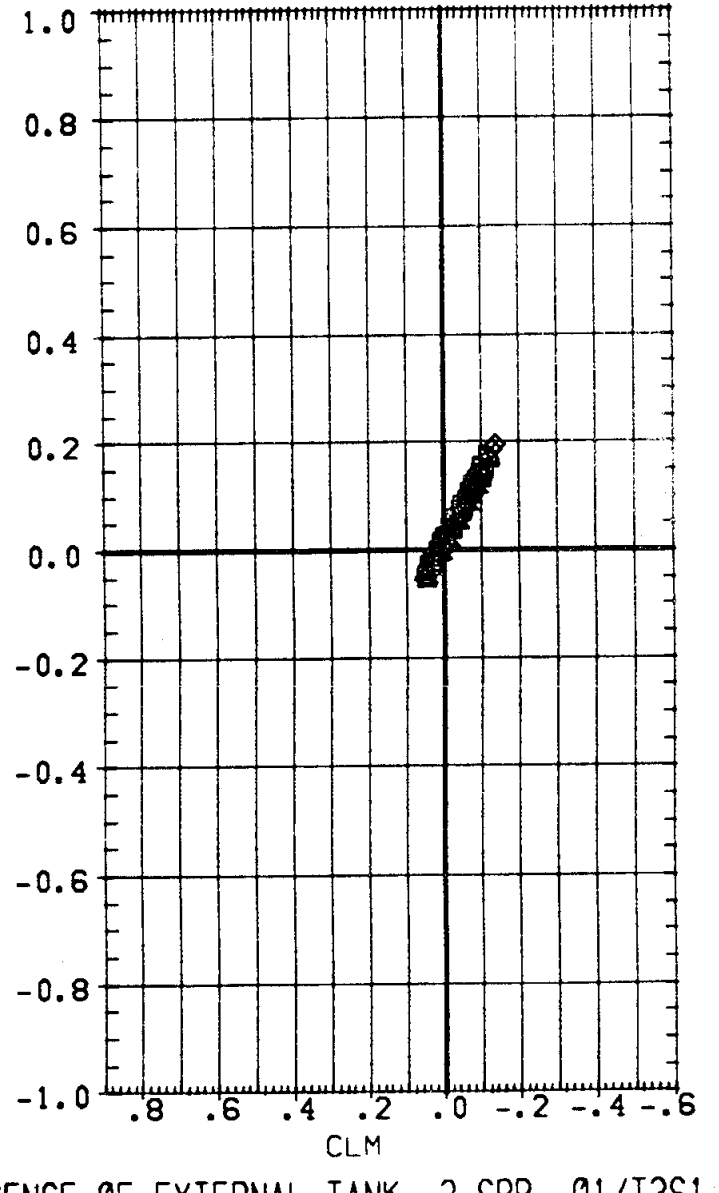
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72008)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72009)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72010)	○	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72011)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72012)	▽	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72013)	⬠	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







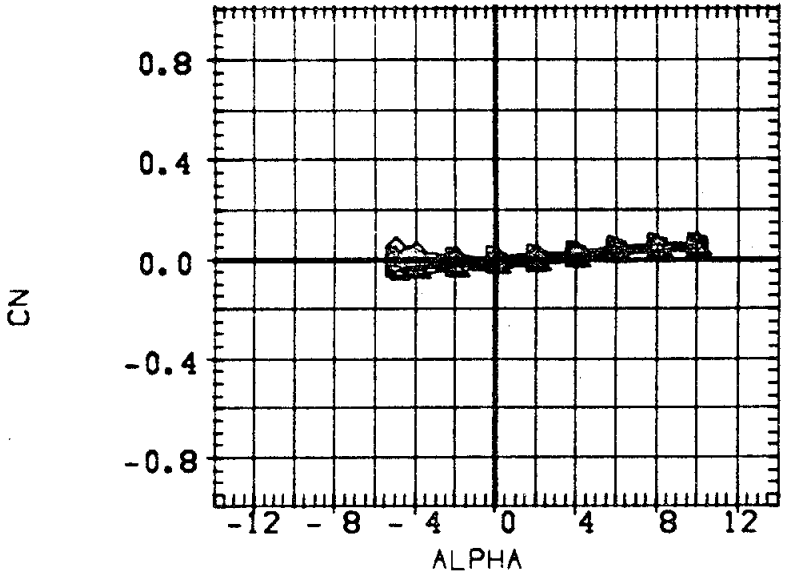
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

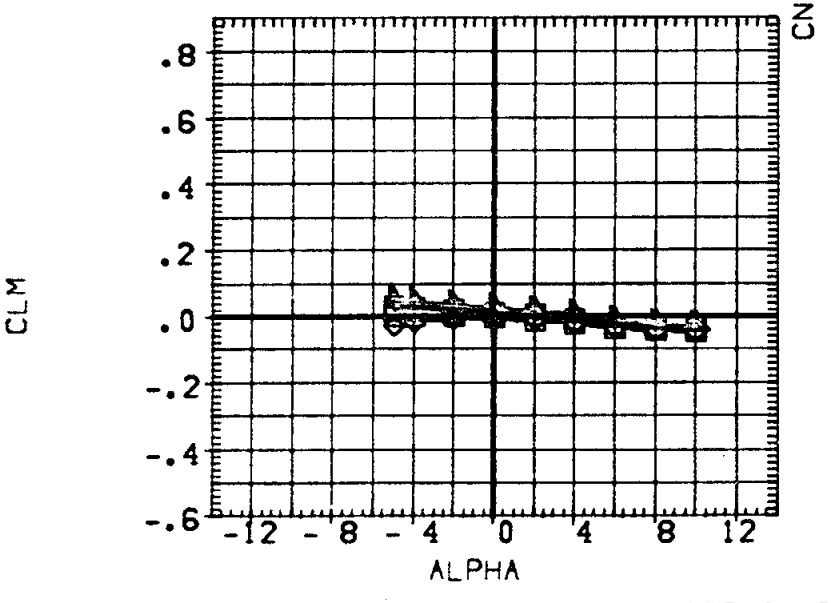
(H)MACH = 2.99

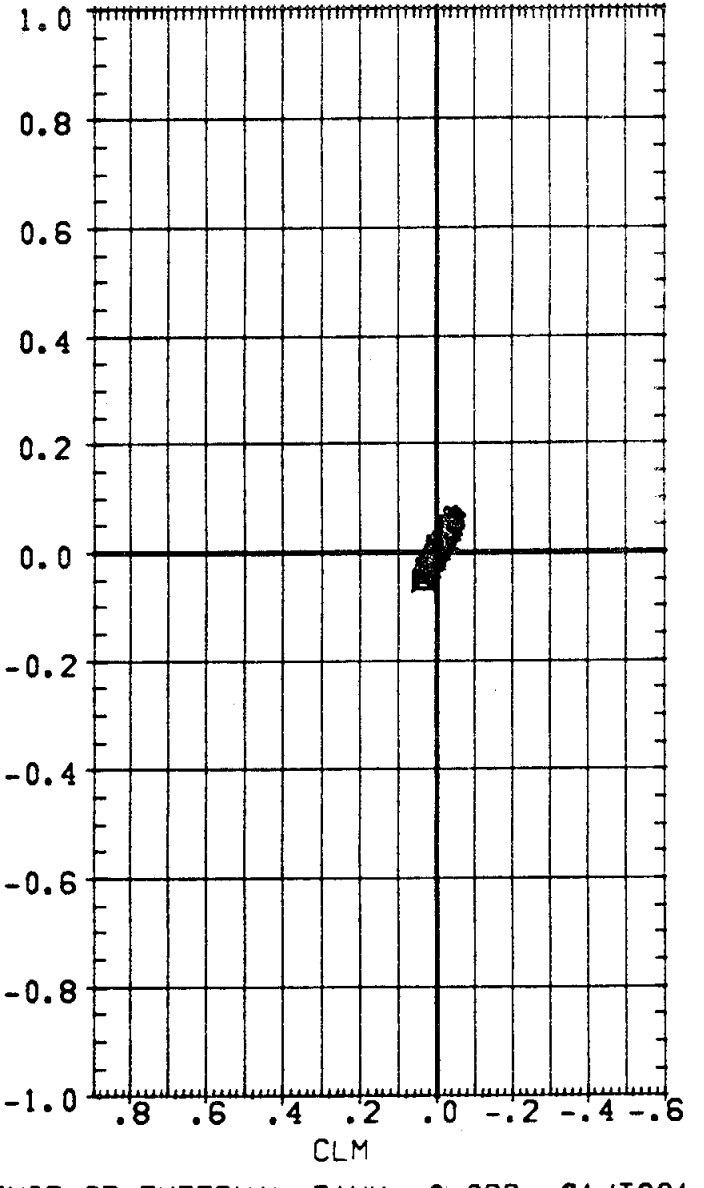
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72008)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72011)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72012)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72013)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





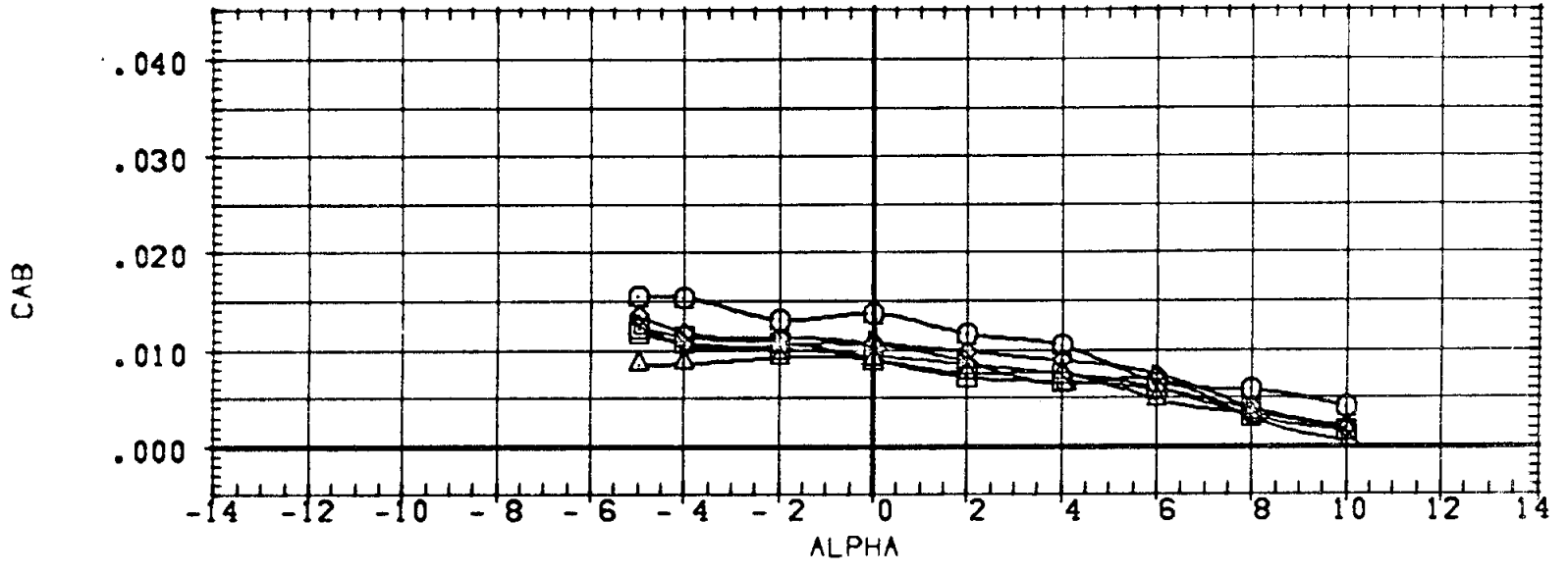


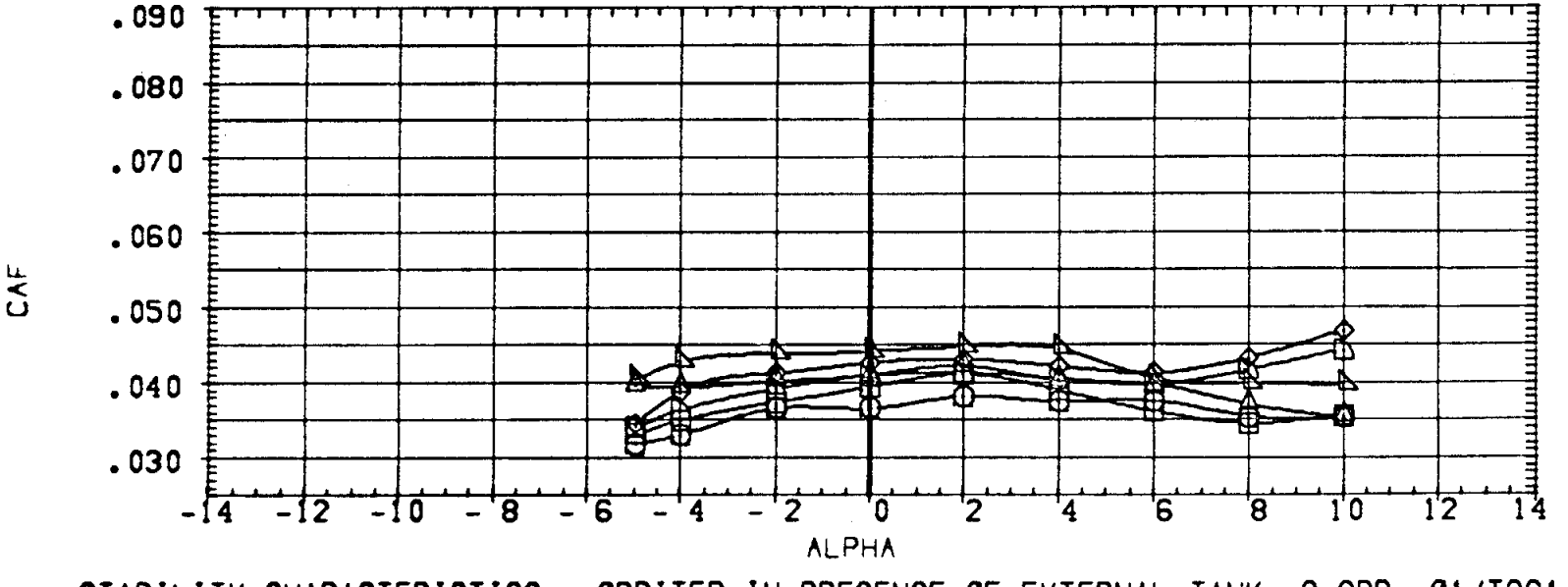
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(1)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72006)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72008)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	.000
(A72012)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)	⬠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



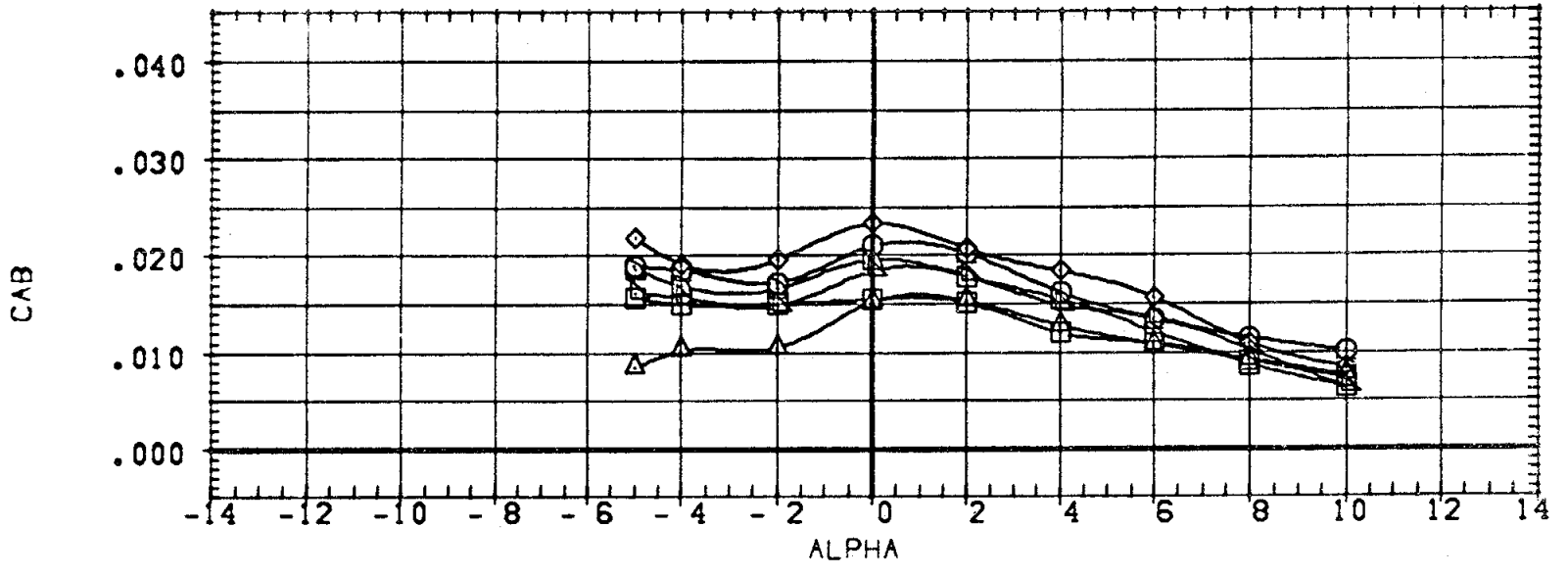


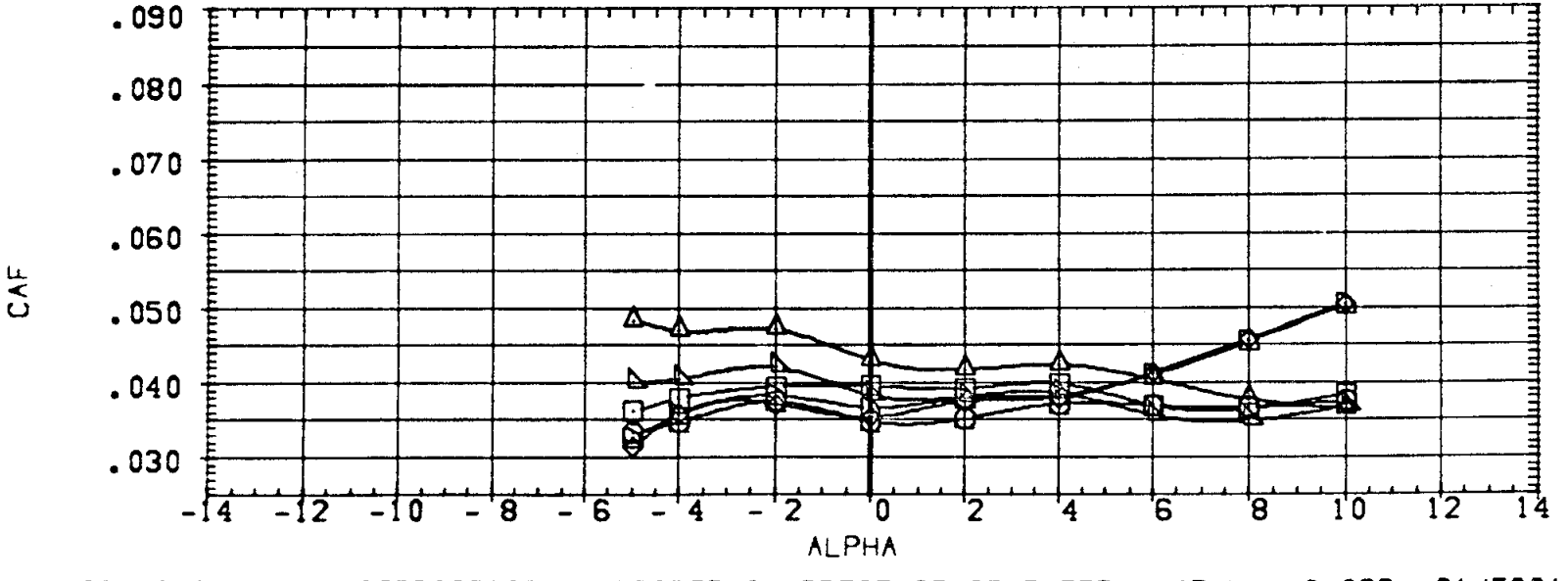
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72006)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72009)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	.000
(A72012)	⊲	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)	⊳	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1526.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



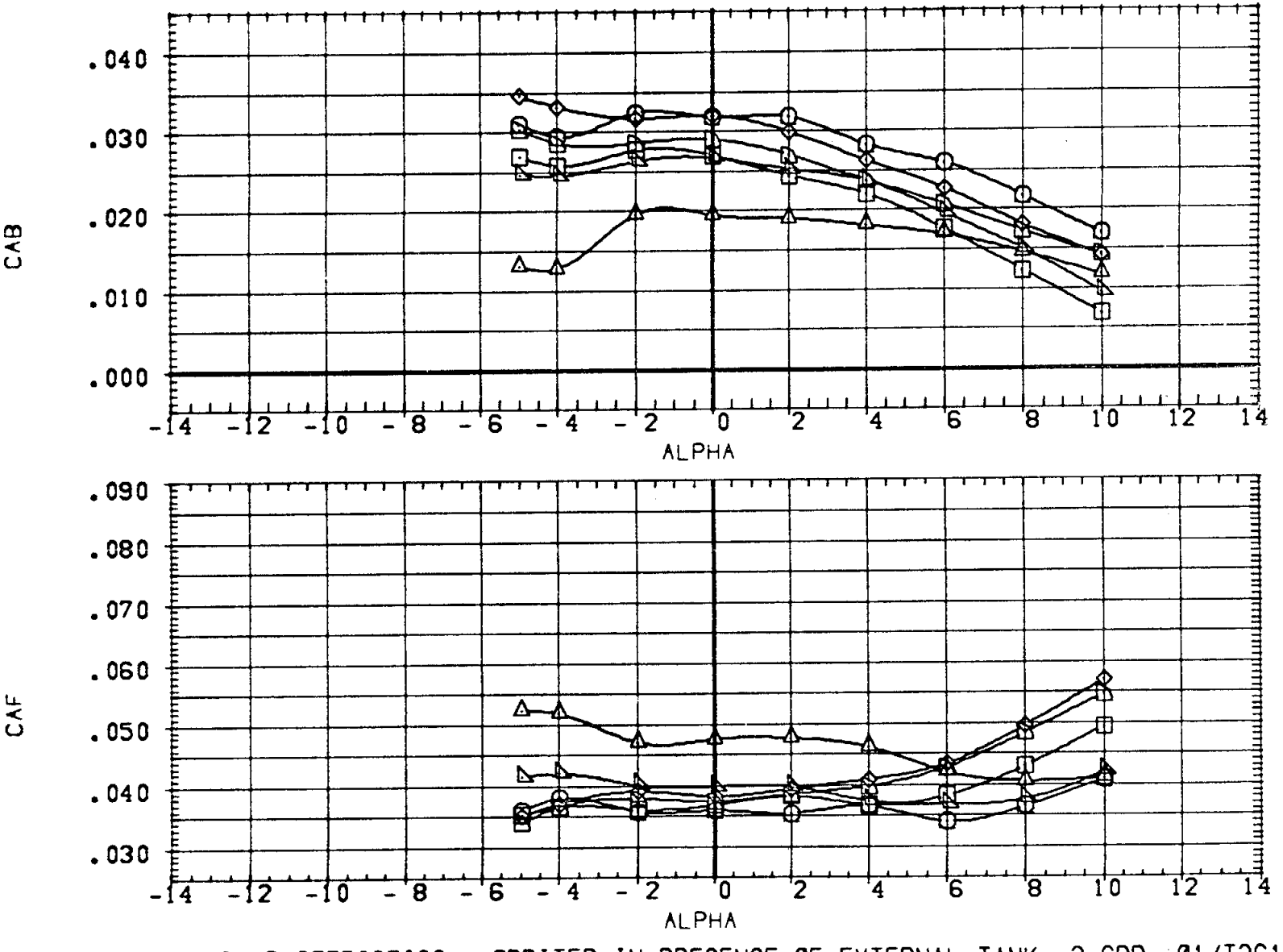


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(B)MACH = .80

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72008)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)-(S1)	.000	.120	10.000	.000
(A72009)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	.000
(A72012)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	5220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

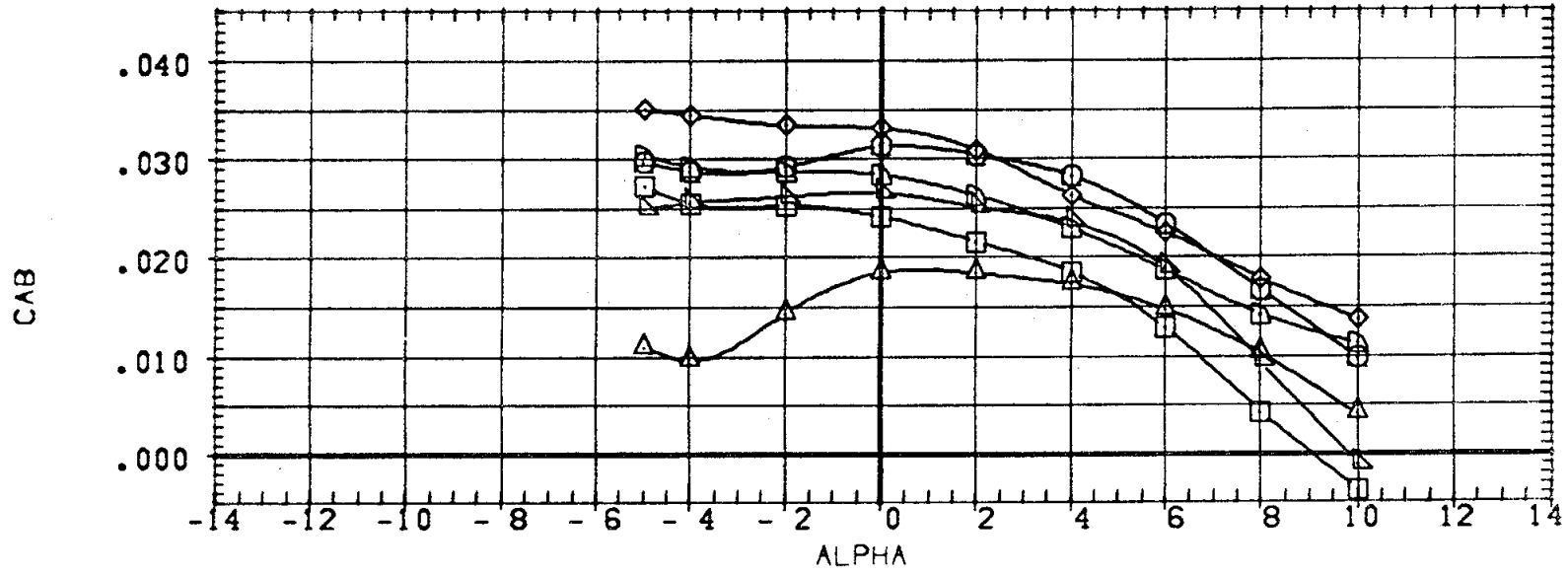


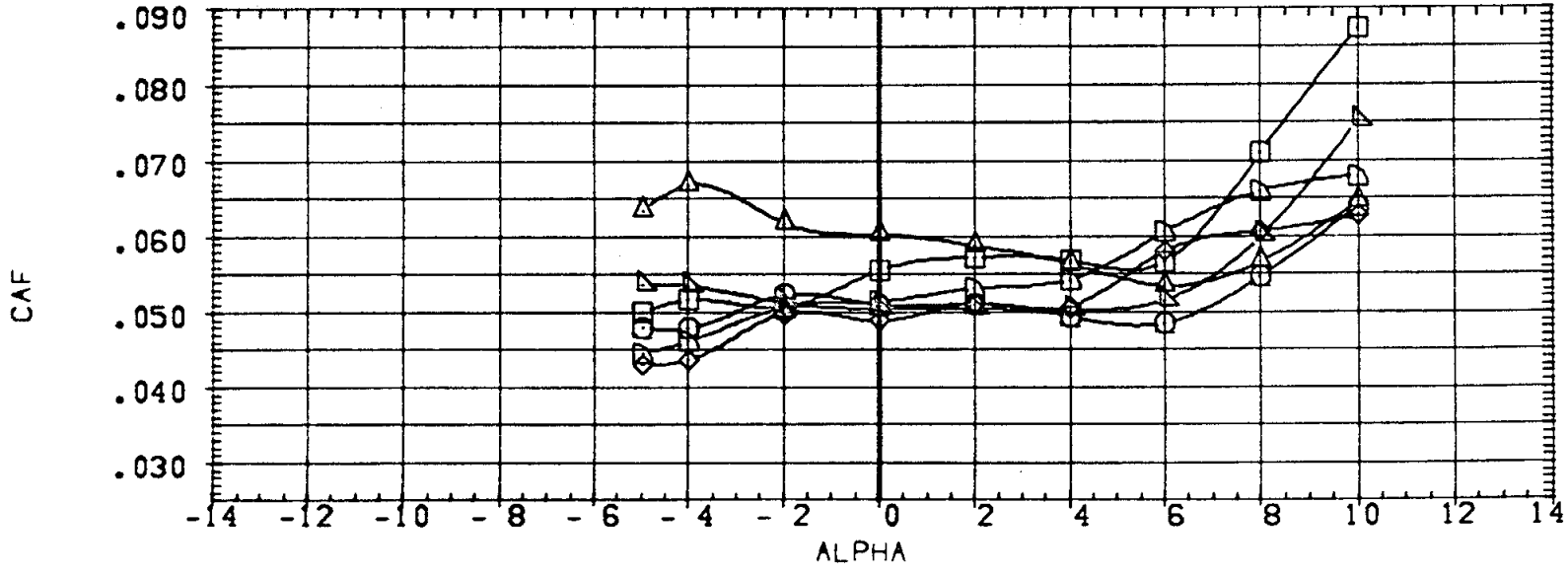
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72006)	◇	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72009)	□	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)	△	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)	◇	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	.000
(A72012)	□	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)	△	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



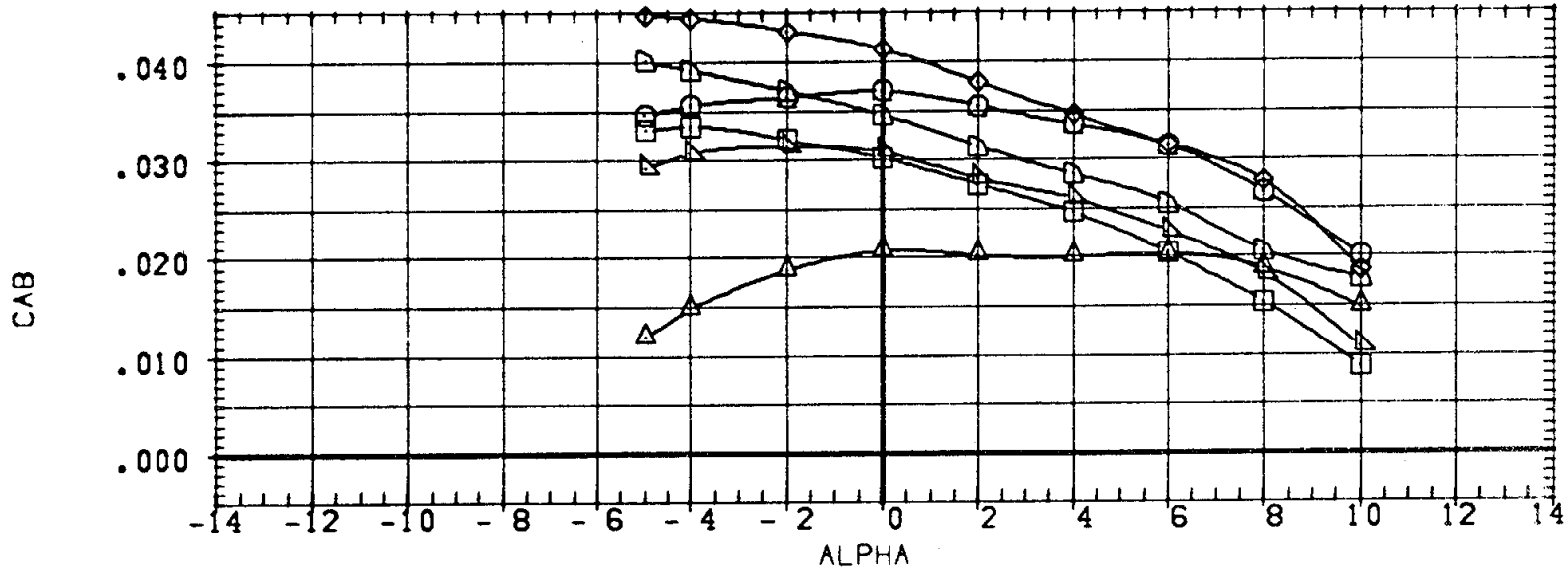


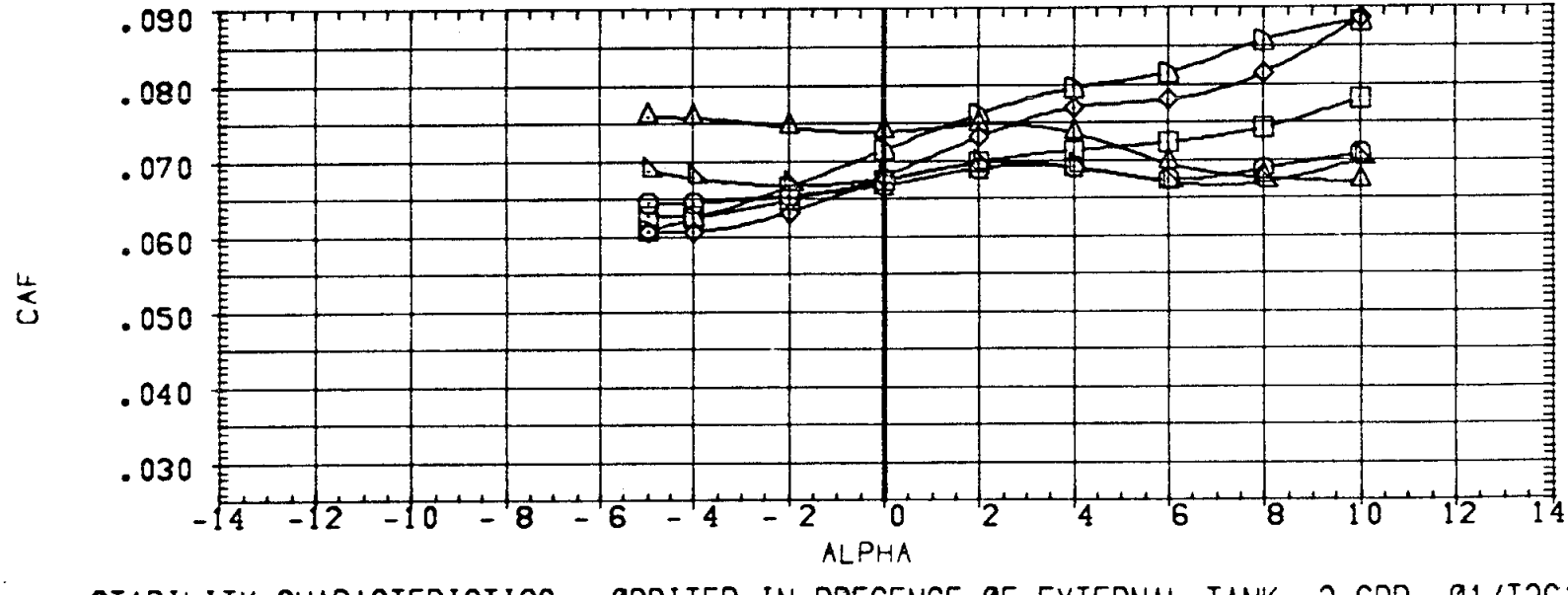
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(D)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72008)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	.000
(A72009)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)	.000	.240	10.000	.000
(A72012)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)		MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



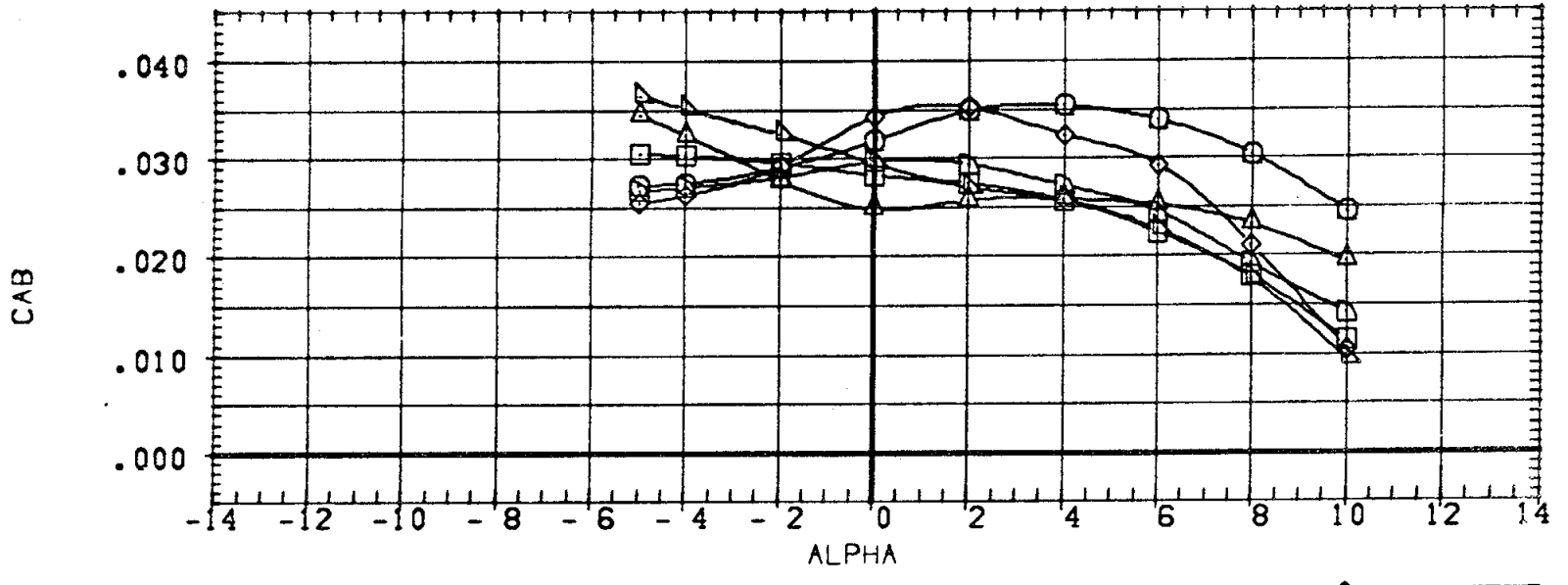


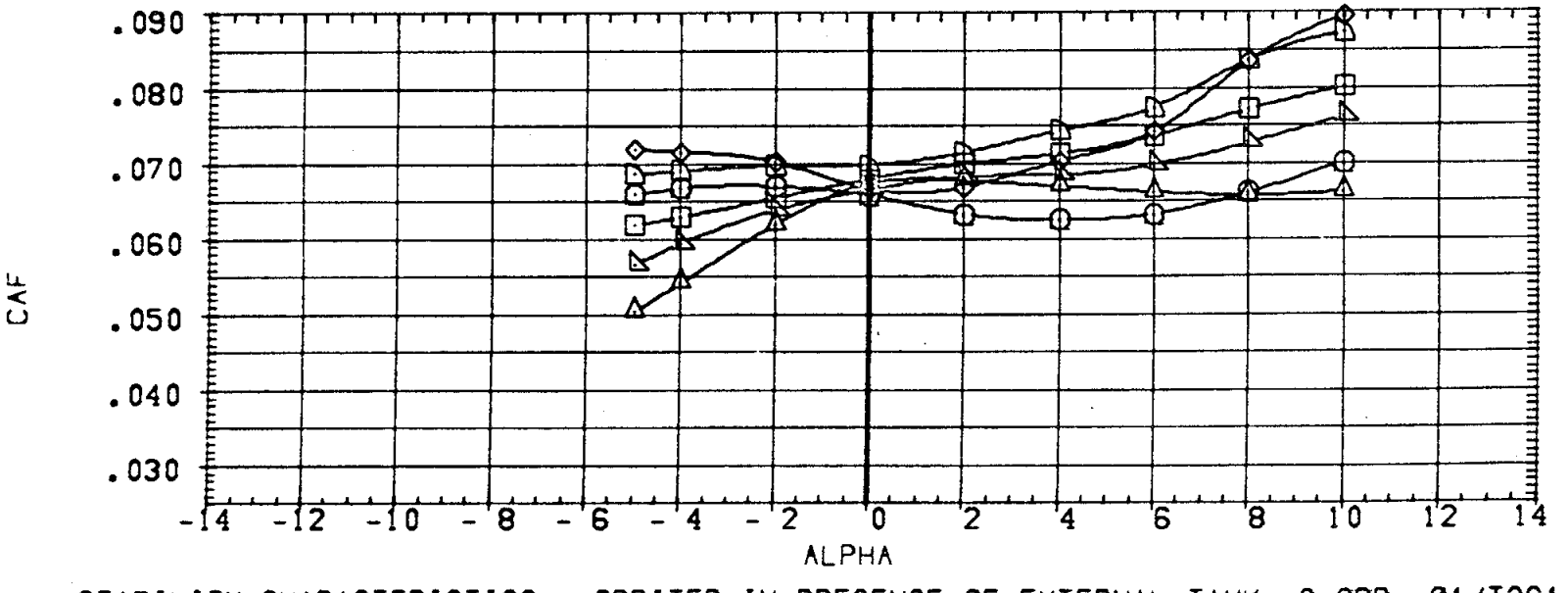
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72008)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(I3)(S1)	.000	.120	10.000	.000
(A72009)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	.000
(A72012)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)	⊡	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



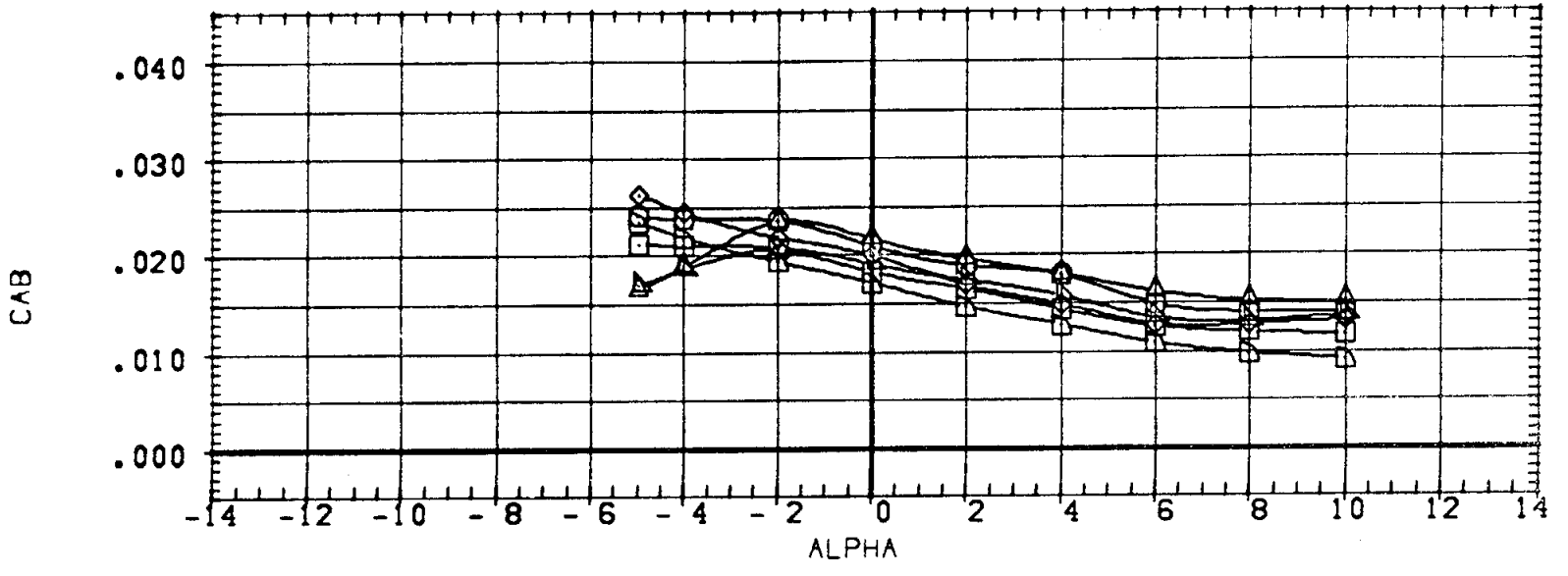


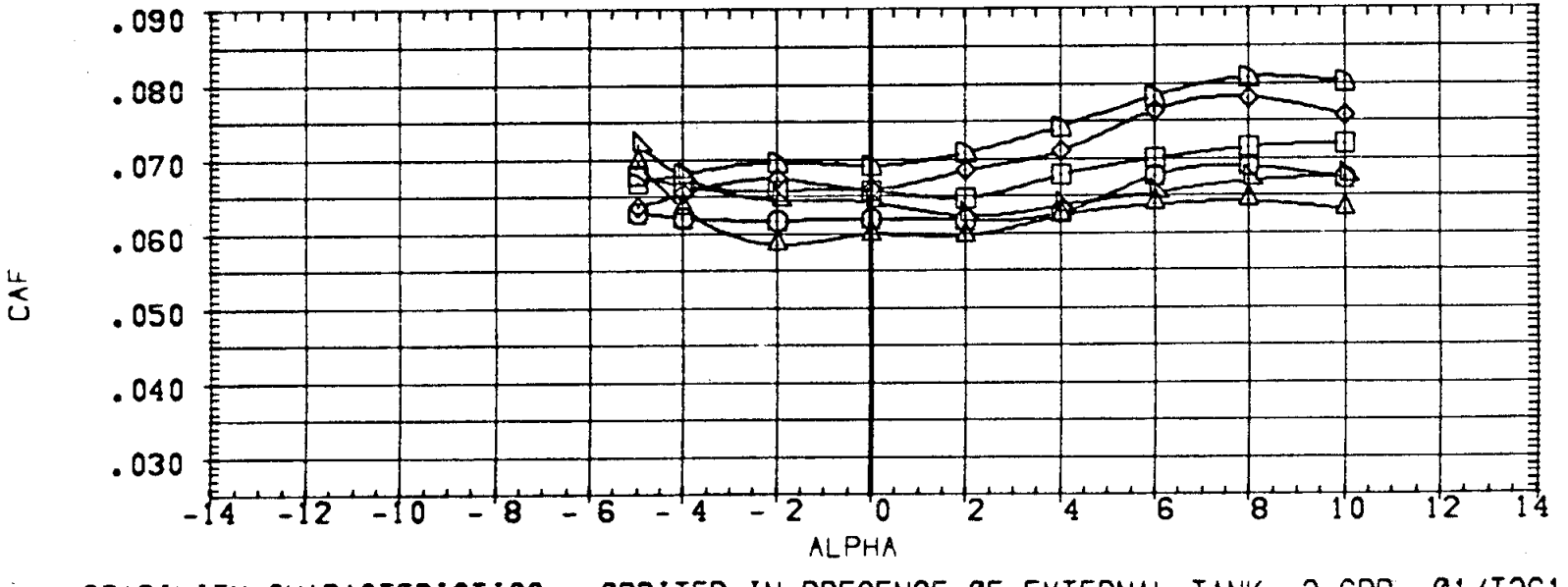
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72008)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	.000
(A72009)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.240	10.000	.000
(A72012)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



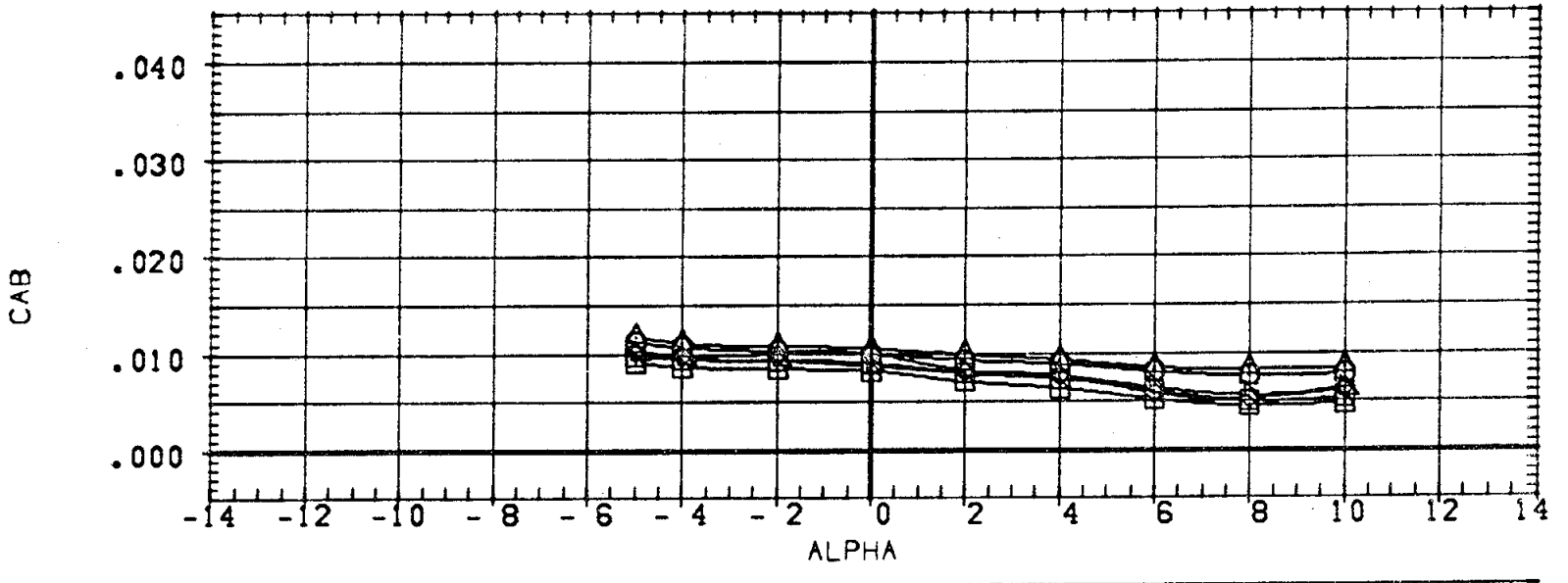


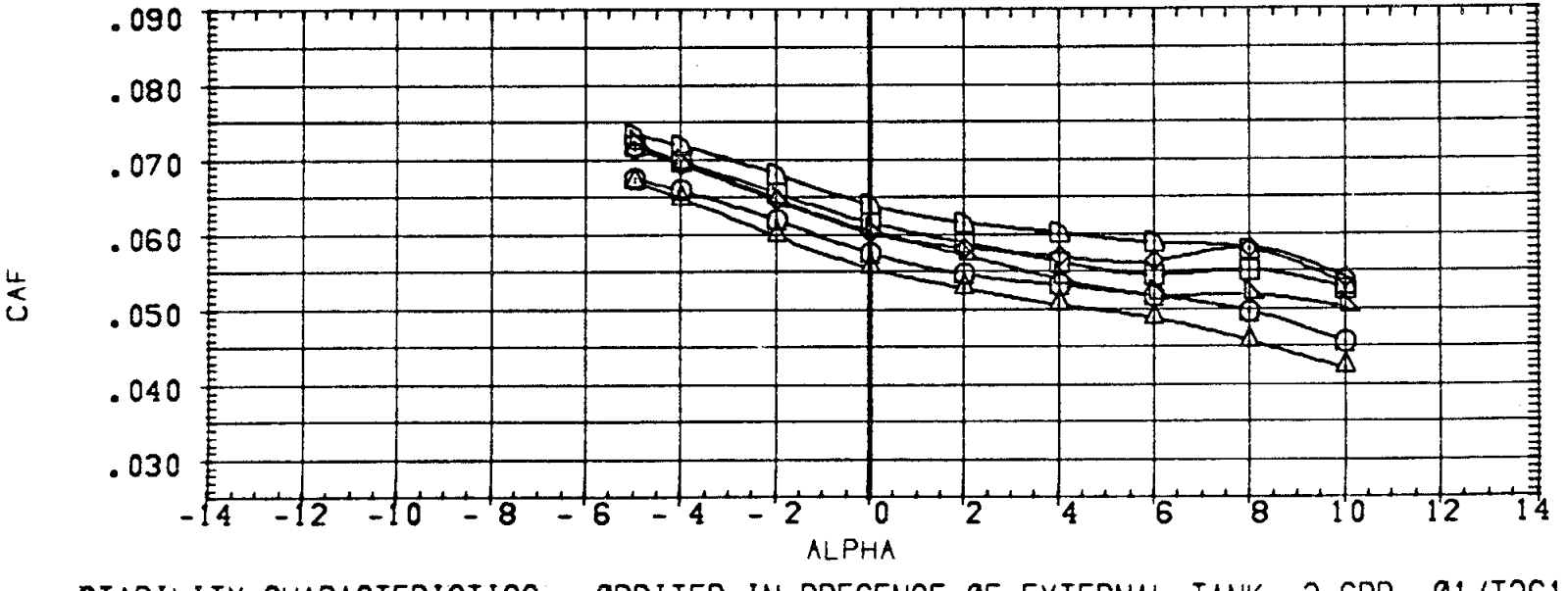
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(G)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72008)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72009)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	.000
(A72012)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



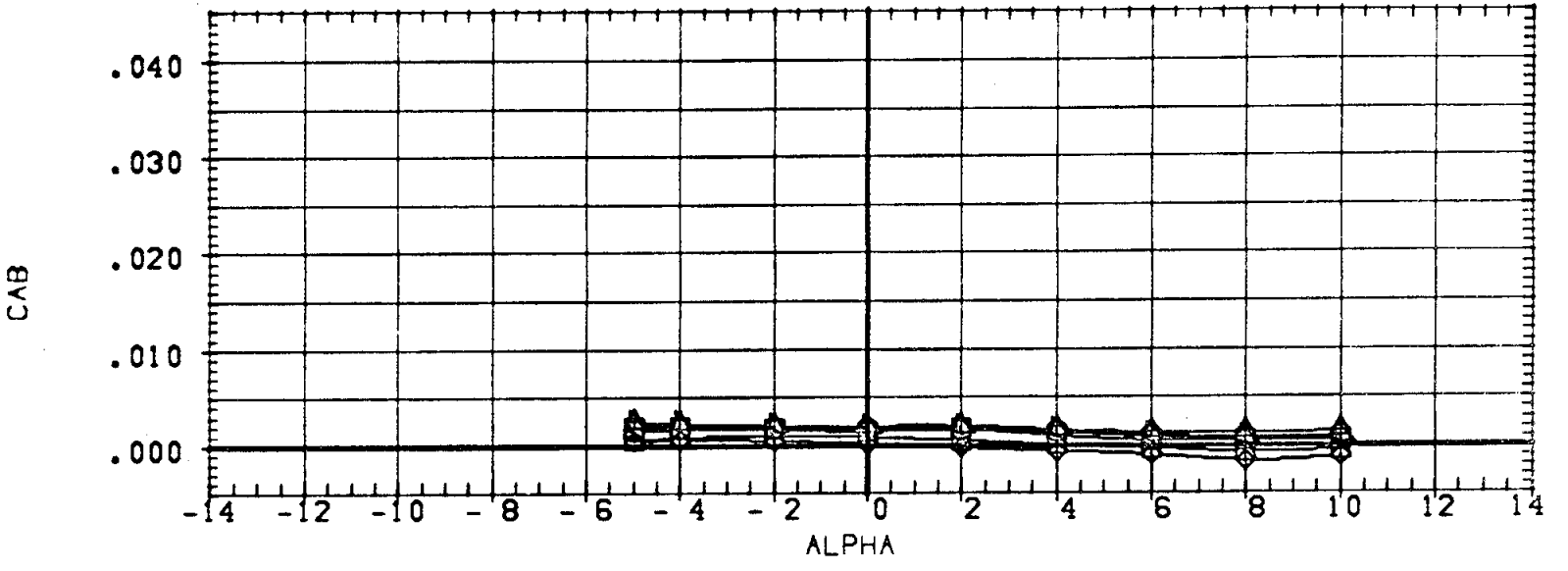


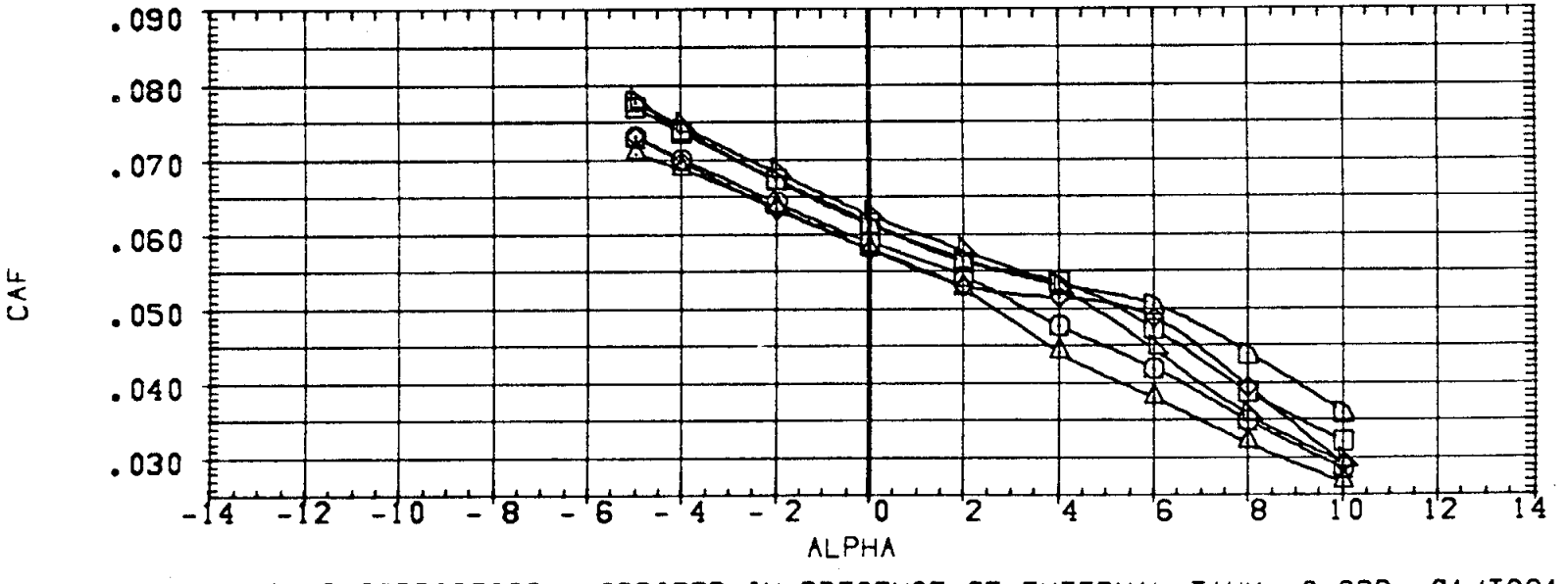
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72006)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72009)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72010)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72011)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	.000
(A72012)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	.000
(A72013)	☆	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3280.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



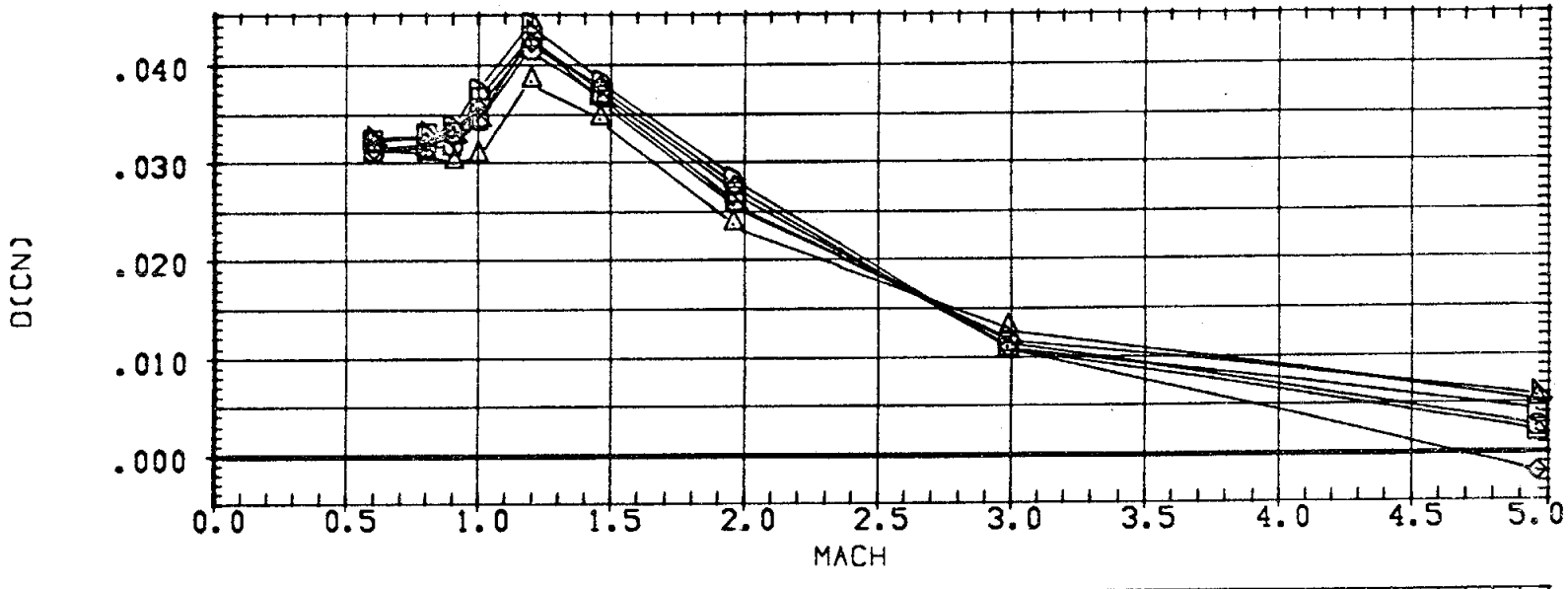


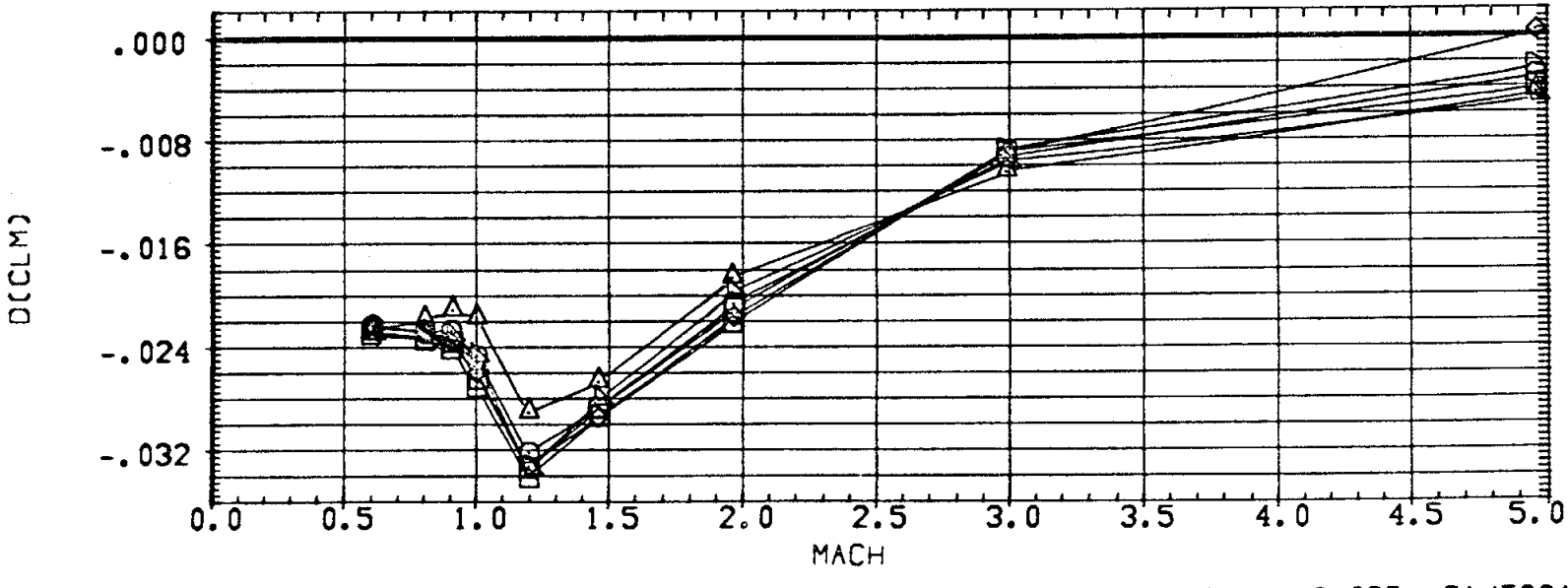
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

( )MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872008)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(872009)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(872010)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(872011)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	.000
(872012)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	.000
(872013)	⬠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



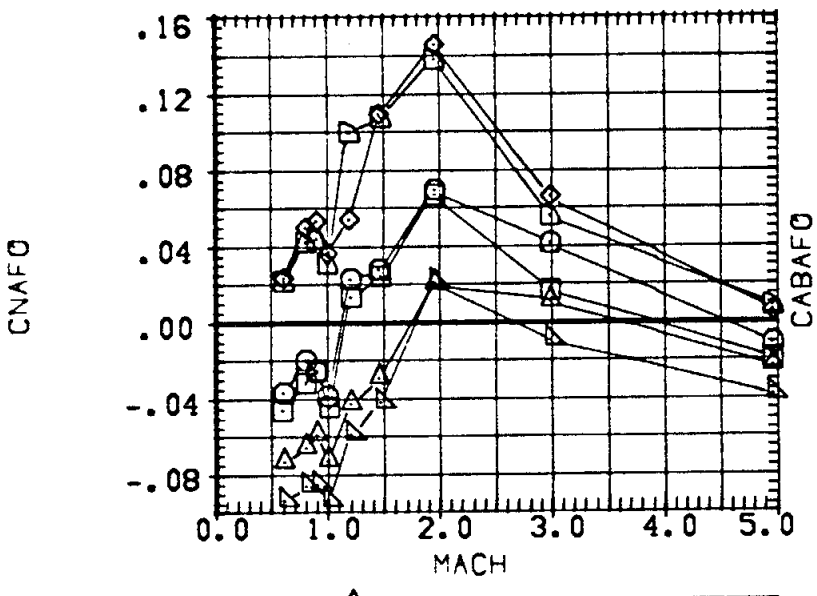


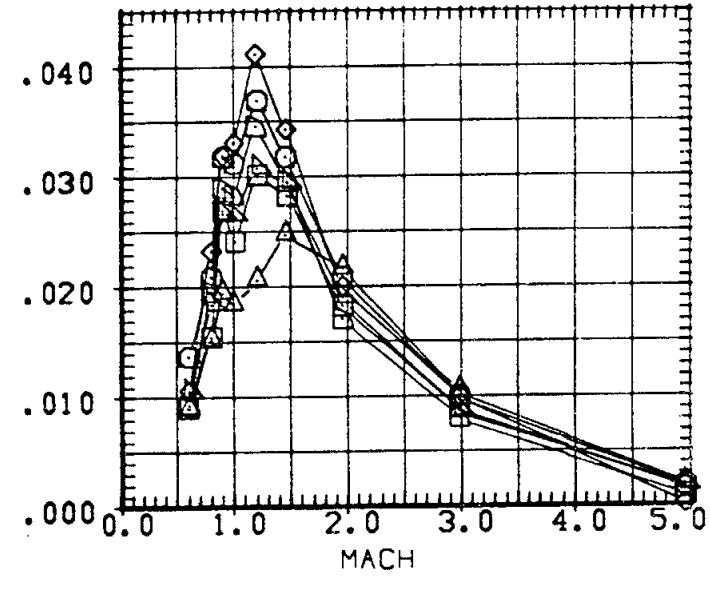
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, O1/T3S1

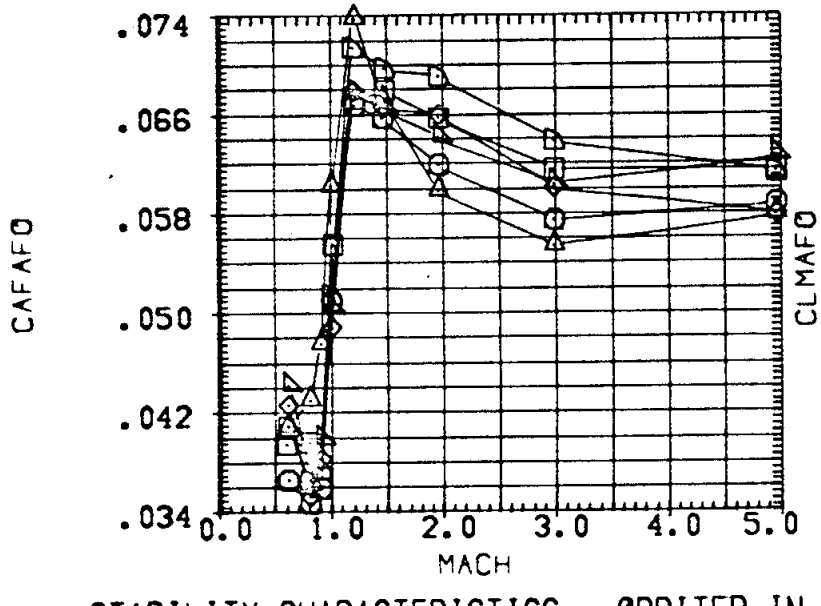
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(872008)	○	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(872009)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(872010)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(872011)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(872012)	▽	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(872013)	⊲	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)

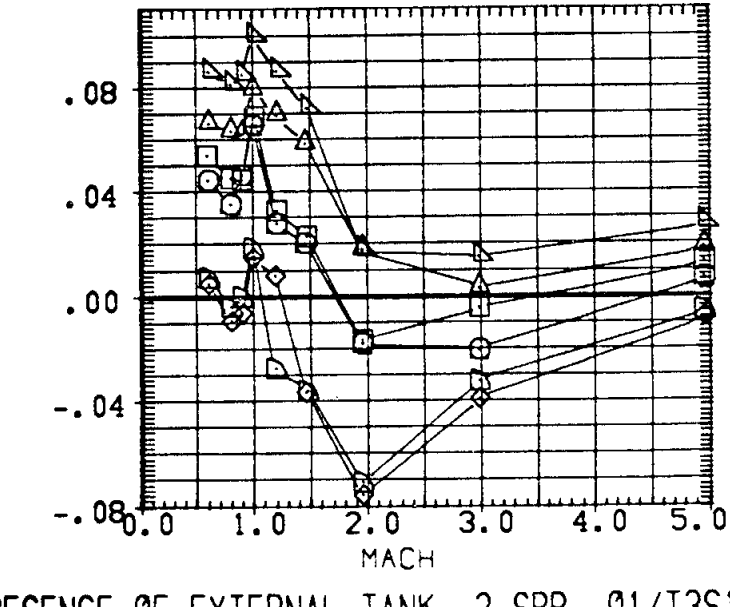
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







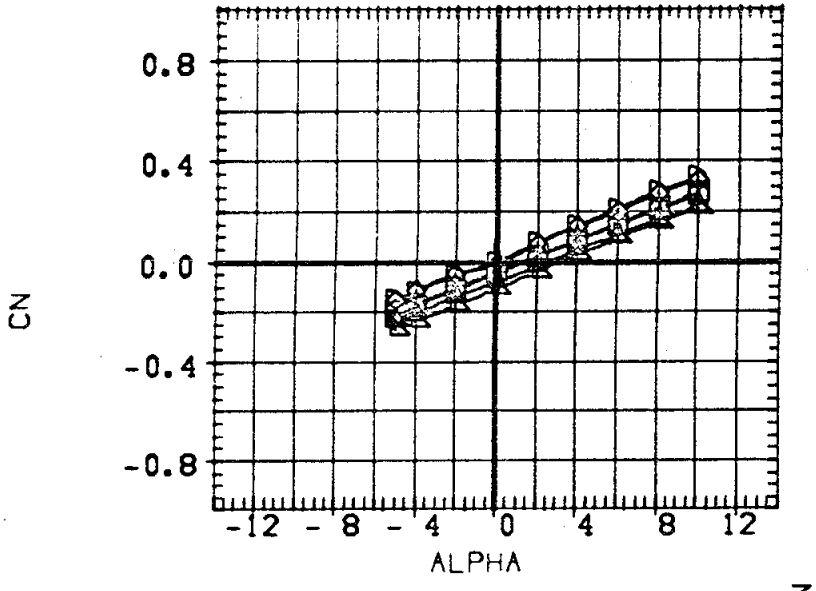


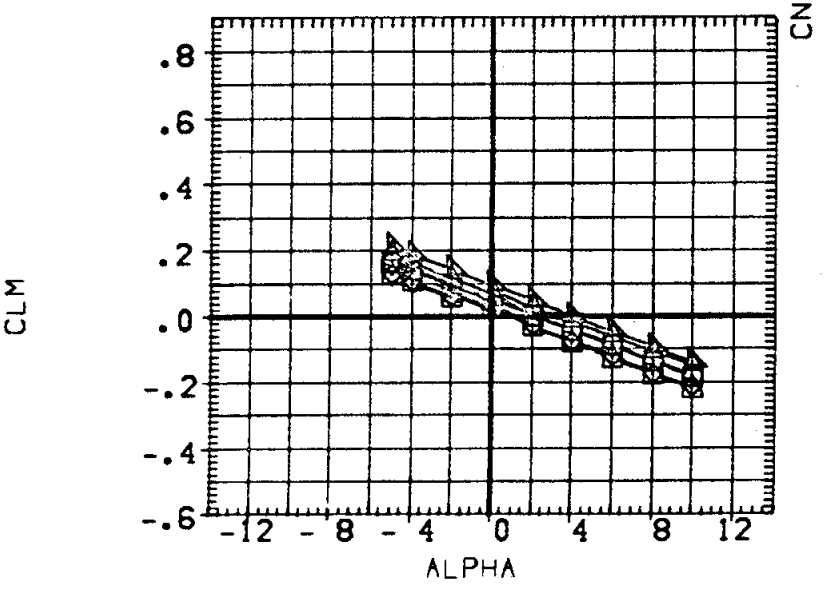
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

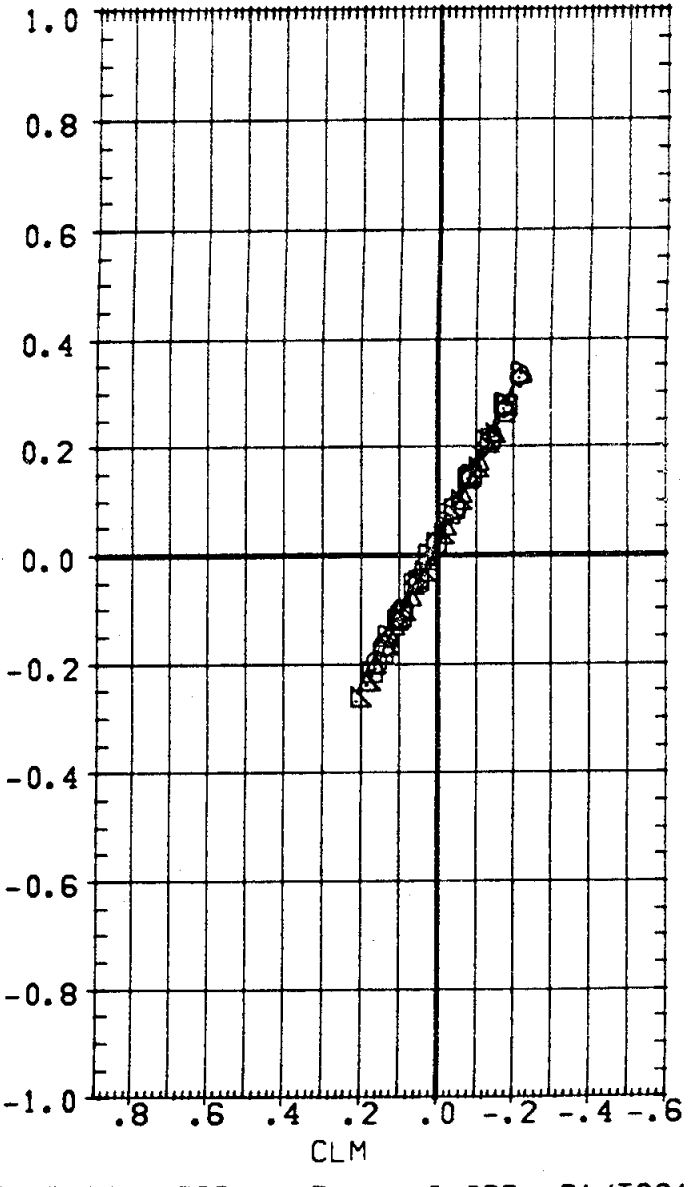
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72022)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72023)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72024)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72025)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72026)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72027)	⊠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







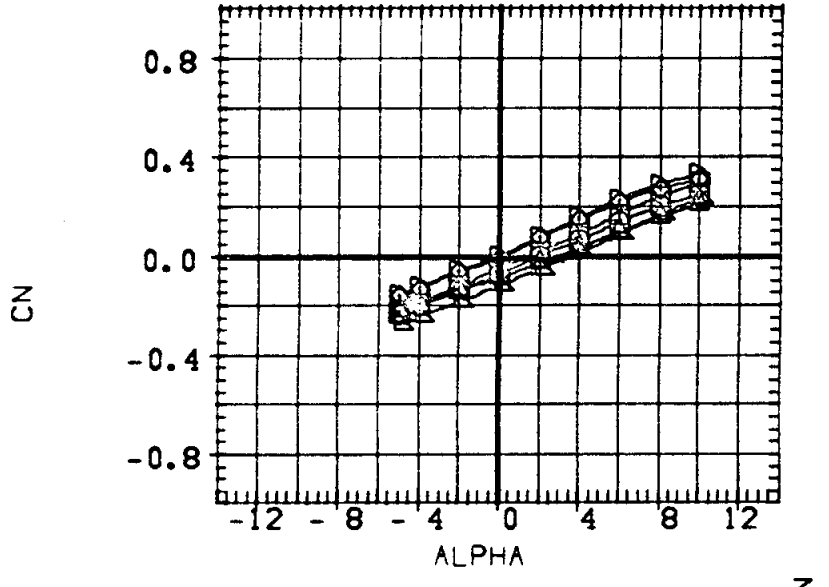
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

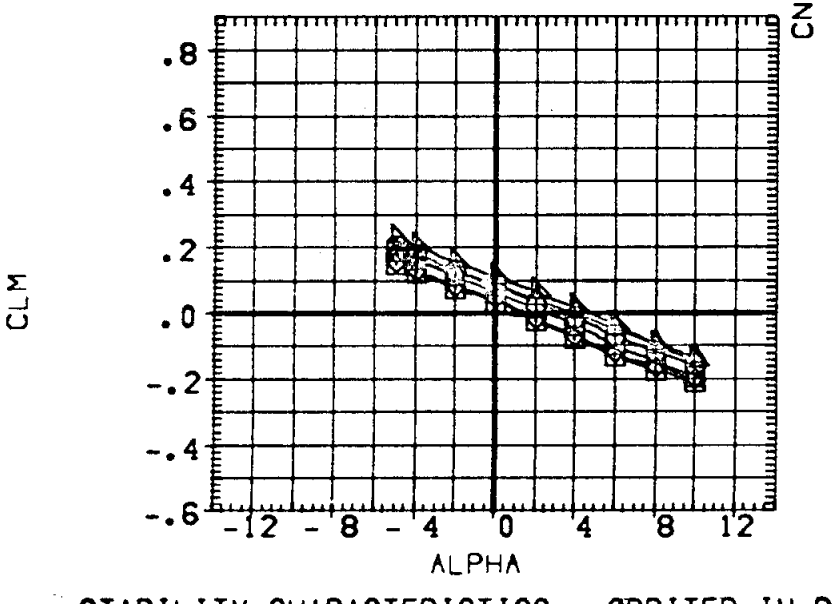
(A)MACH = .60

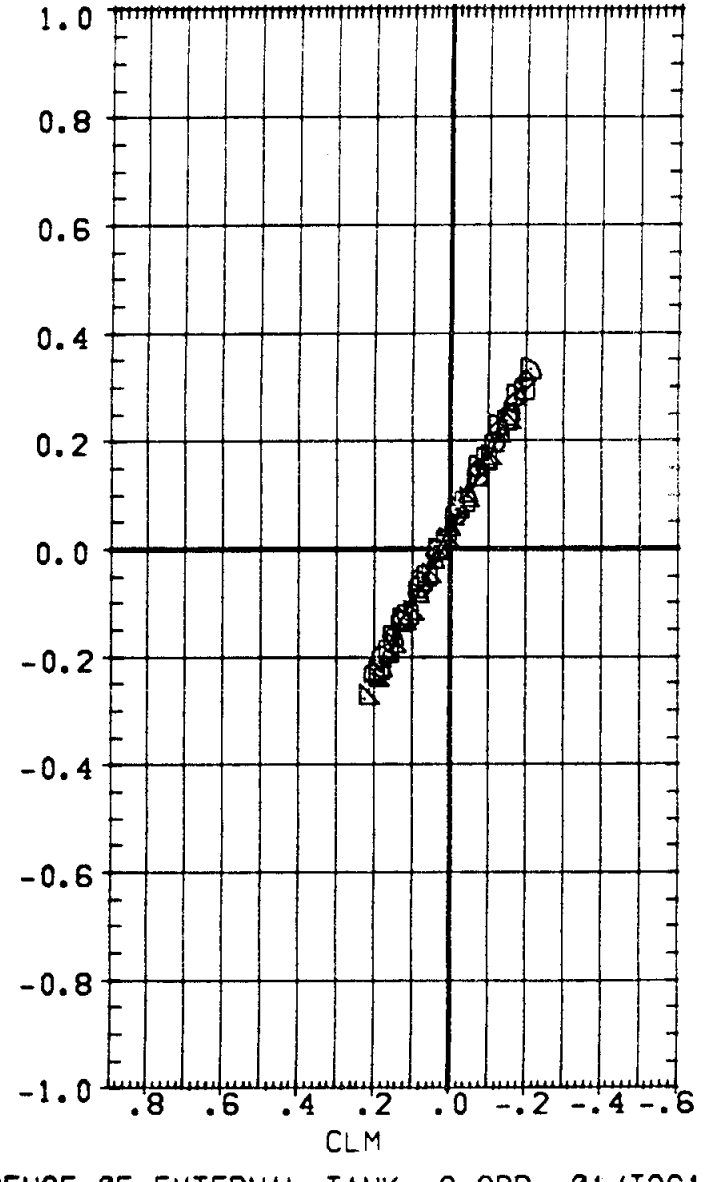
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72022)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72023)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72024)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72025)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72026)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72027)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







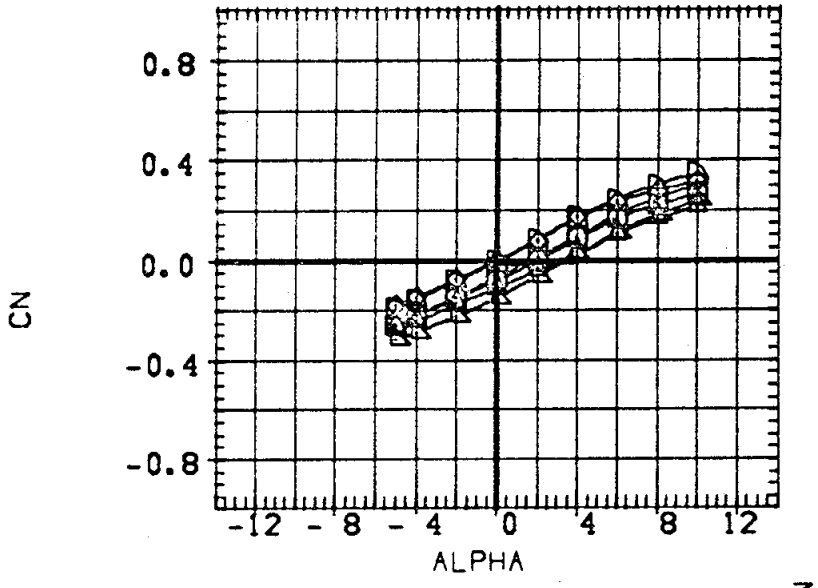
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

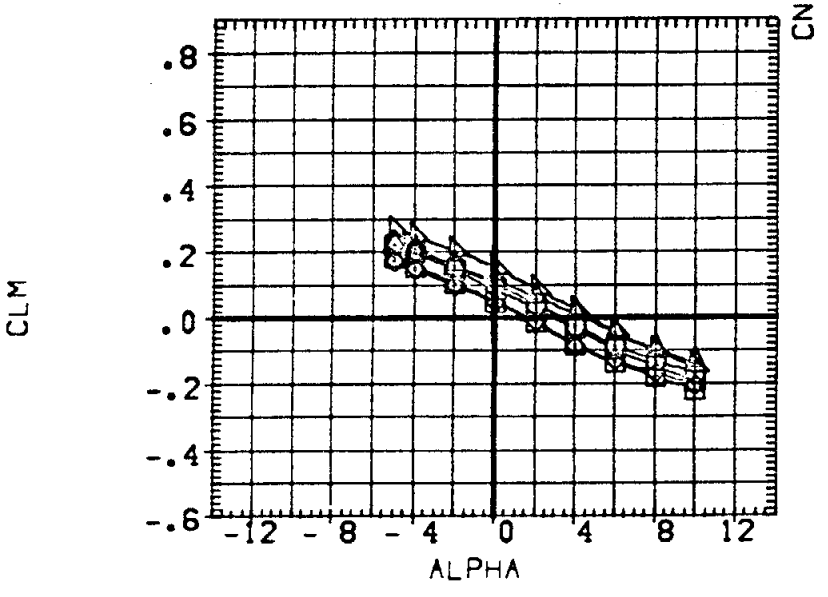
(B)MACH = .90

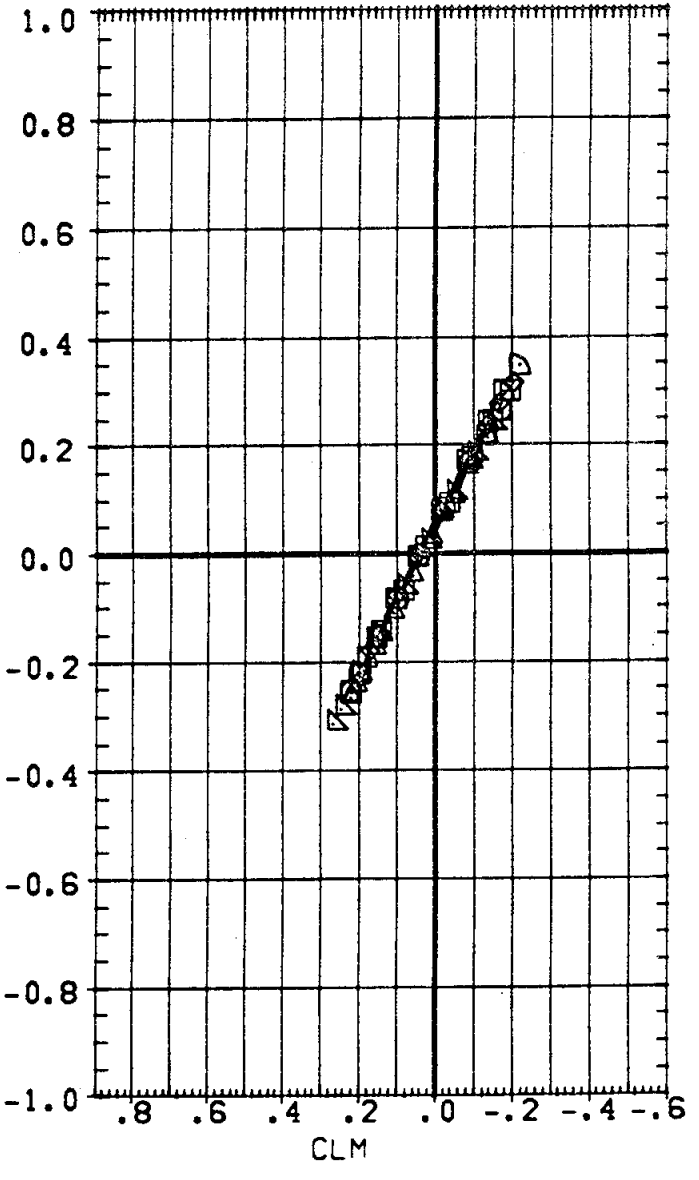
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72022)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72023)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72024)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72025)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72026)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72027)	⊠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





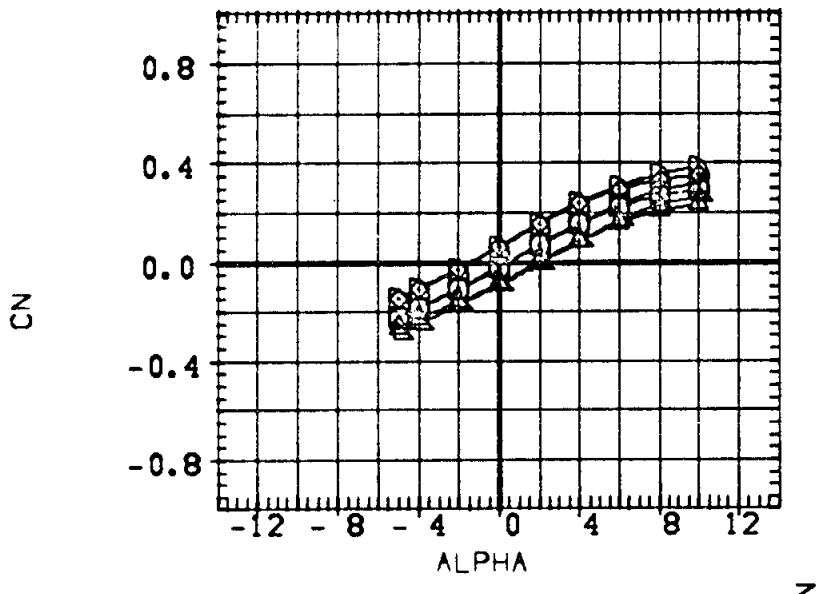


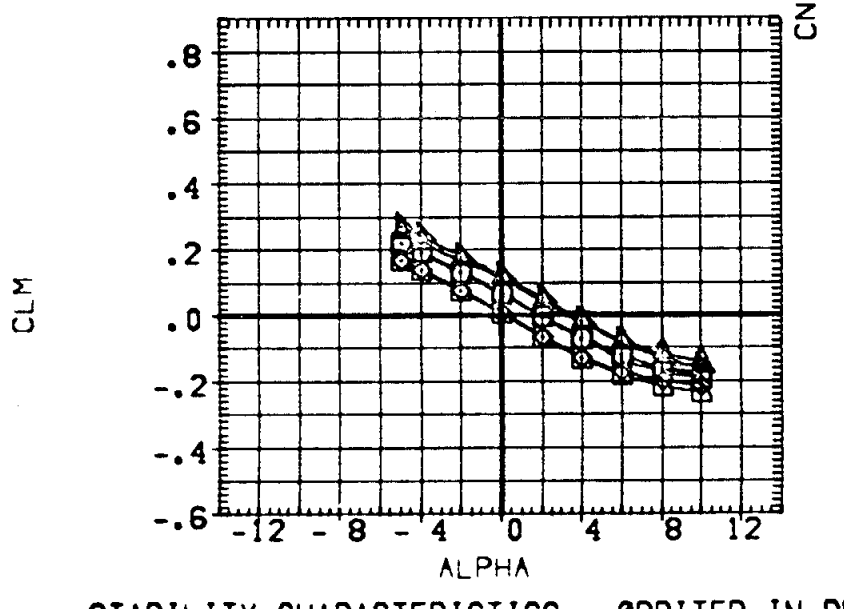
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

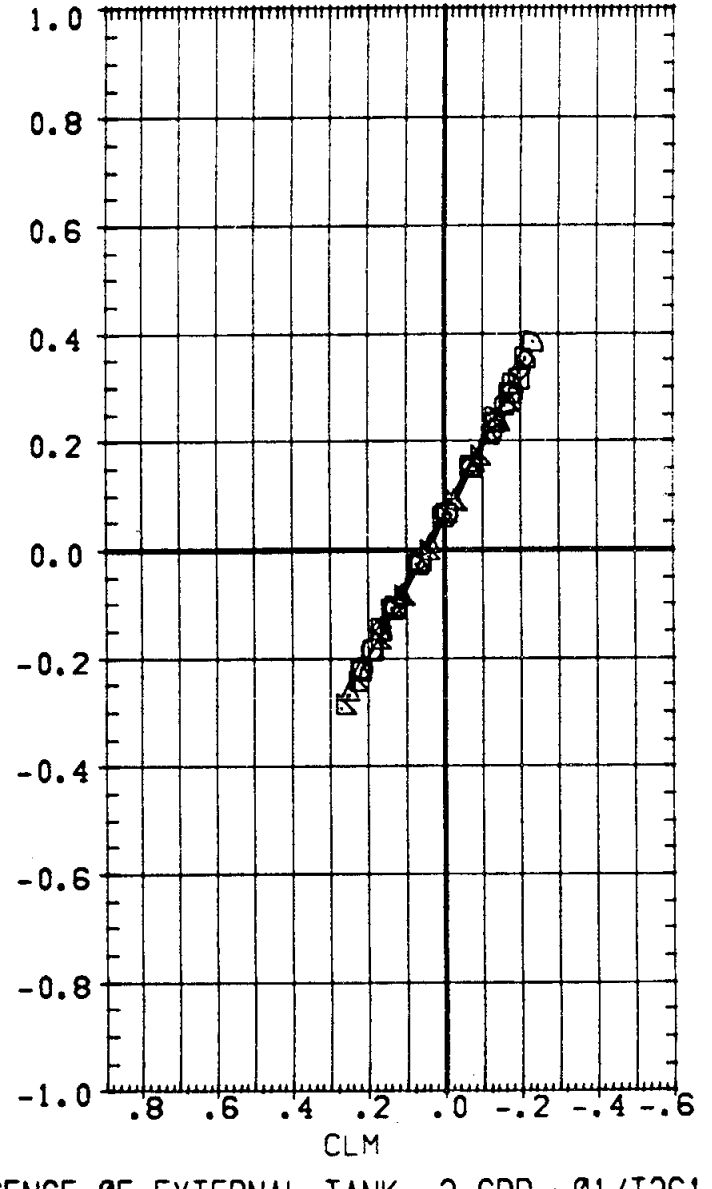
(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72022)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72023)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(A72025)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	-.624
(A72026)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	-.624
(A72027)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







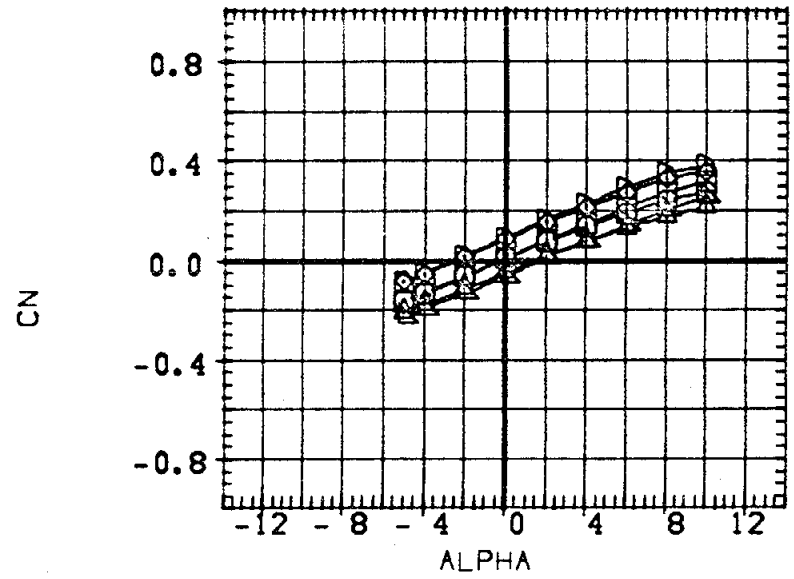
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

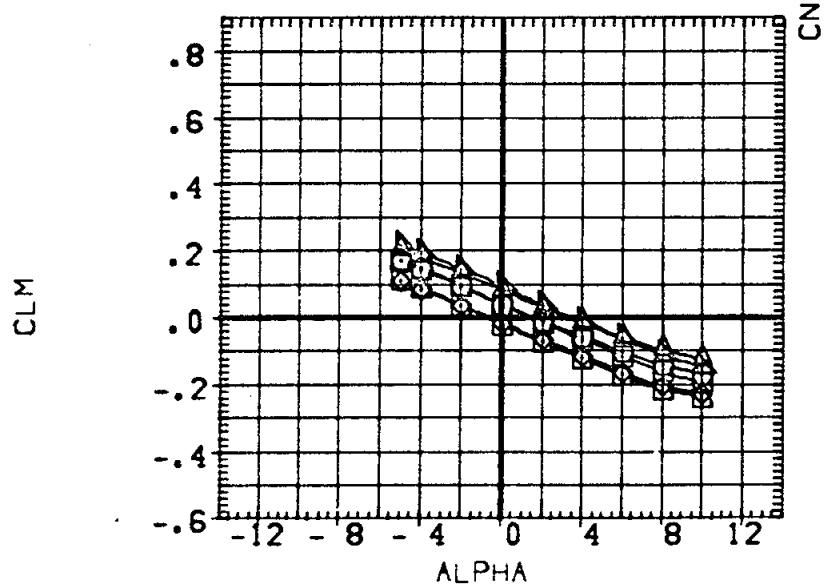
(D)MACH = 1.20

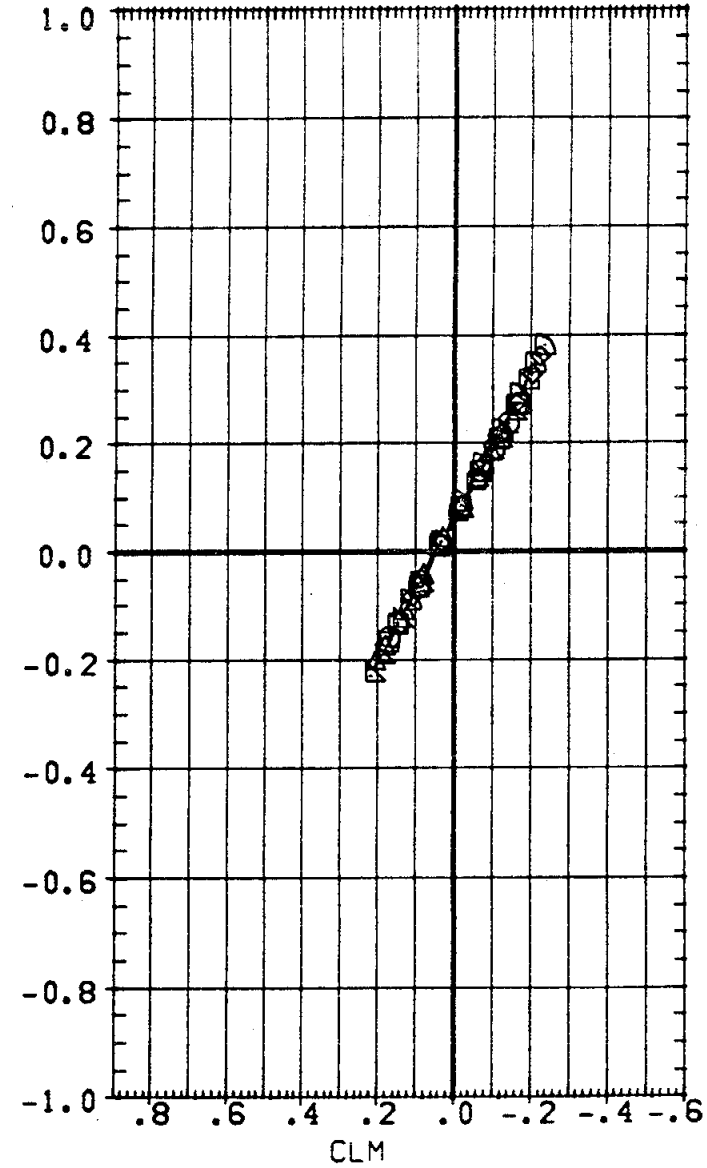
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72022)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72023)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72025)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72026)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72027)	⬡	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





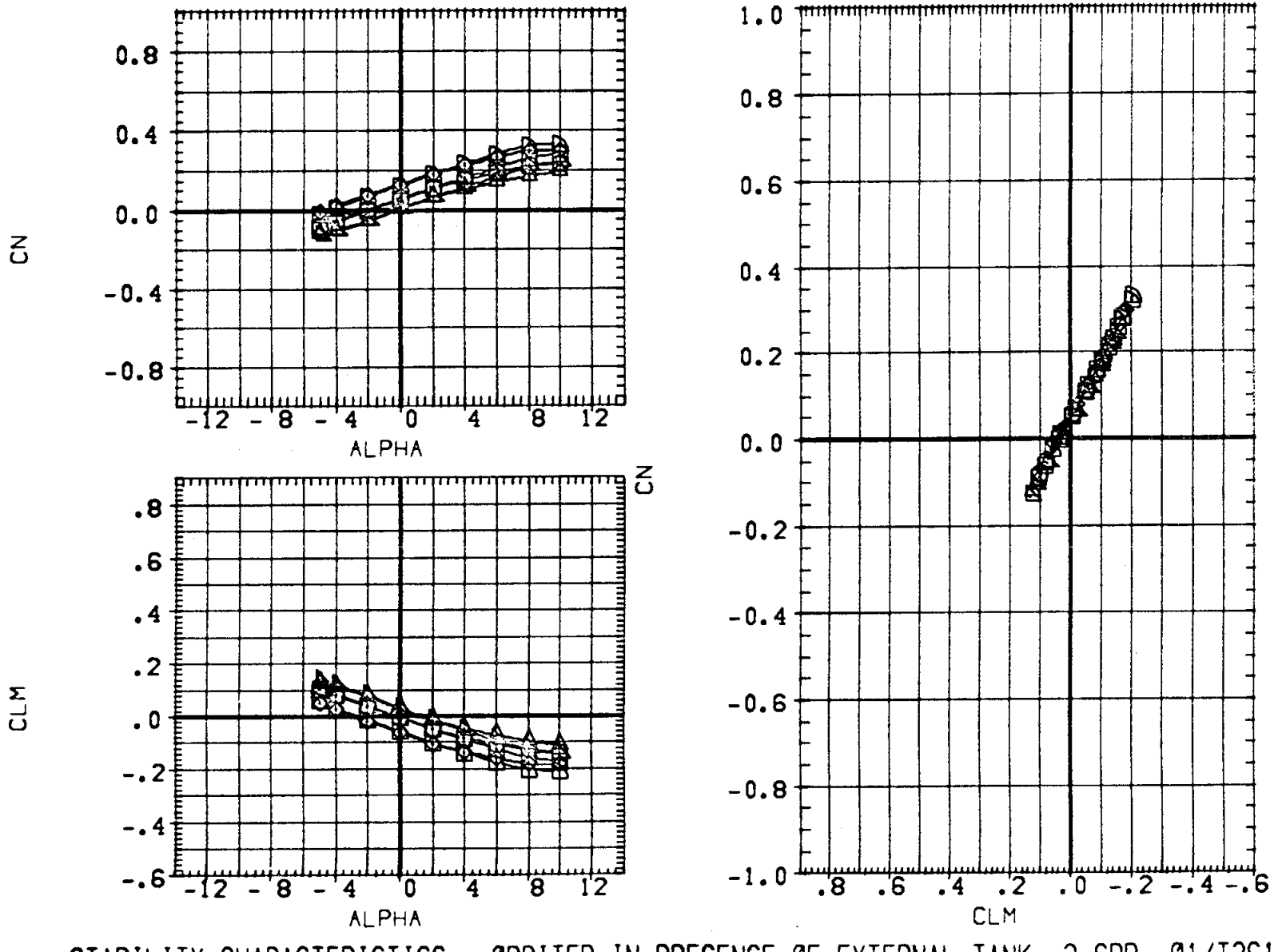


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72022)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72023)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(A72025)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	-.624
(A72026)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	-.624
(A72027)	⬡	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



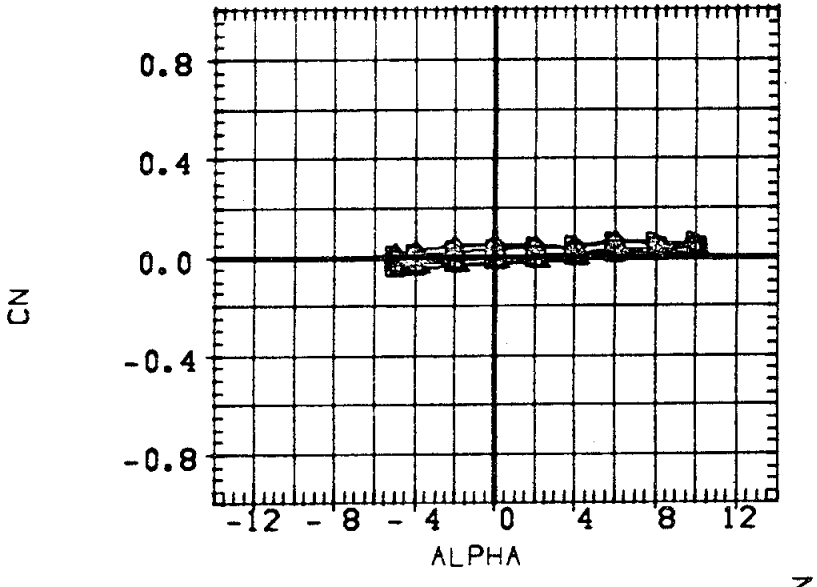
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

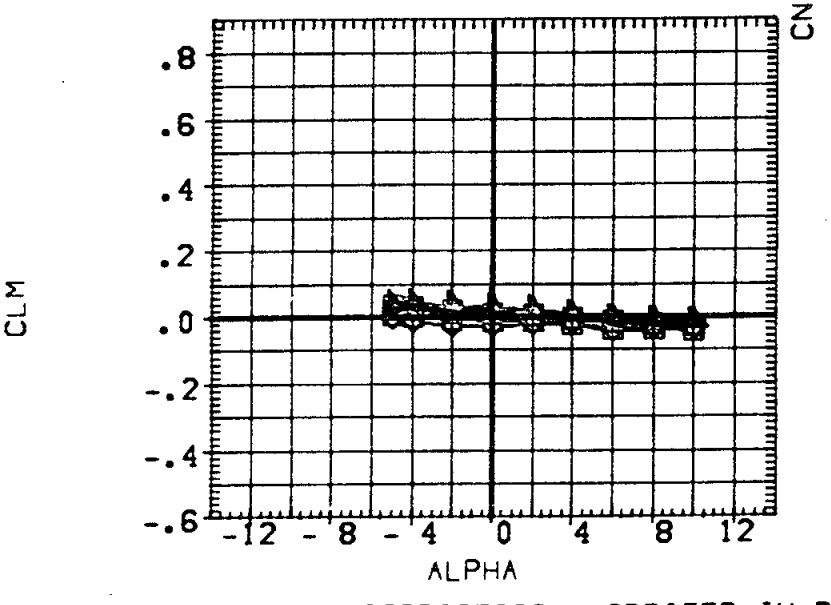
(F)MACH = 1.96

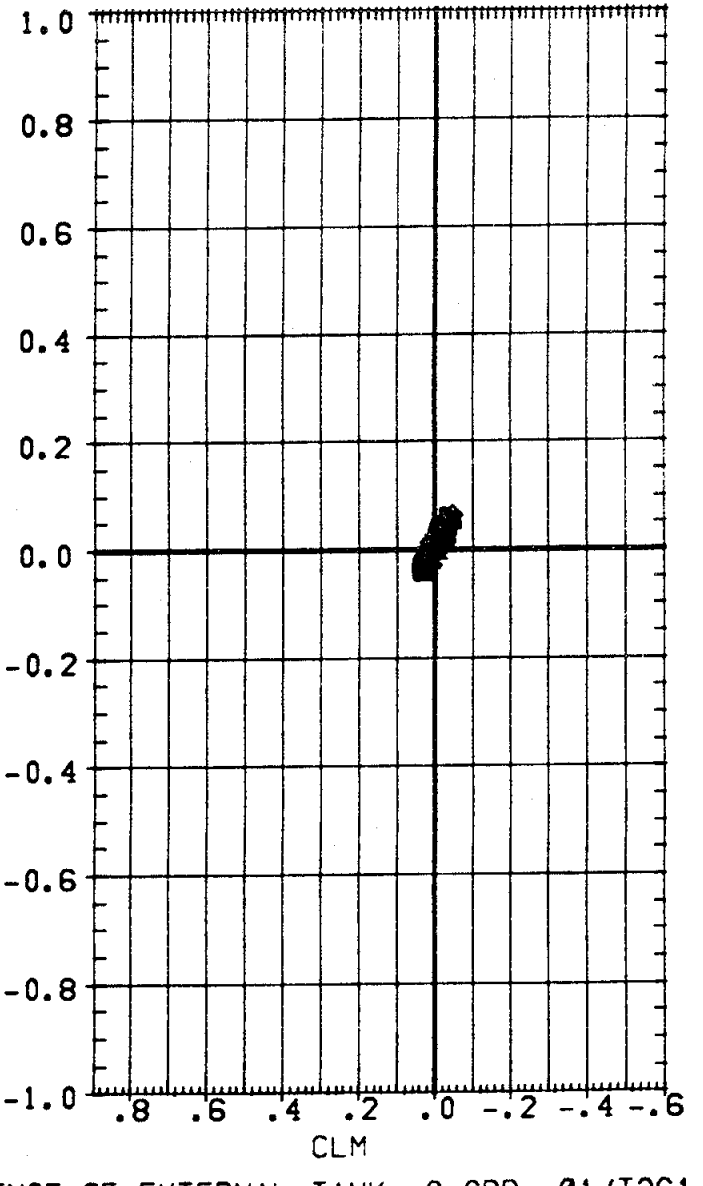
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72022)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72023)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72024)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72025)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72026)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72027)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





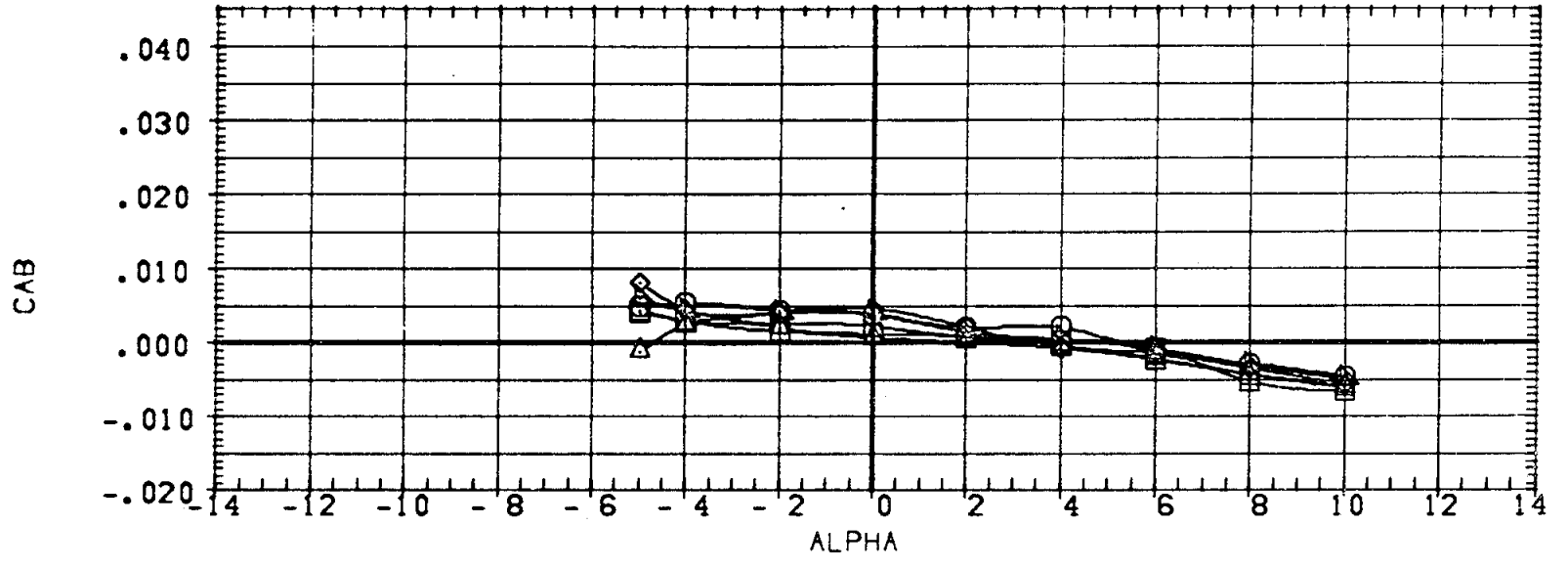


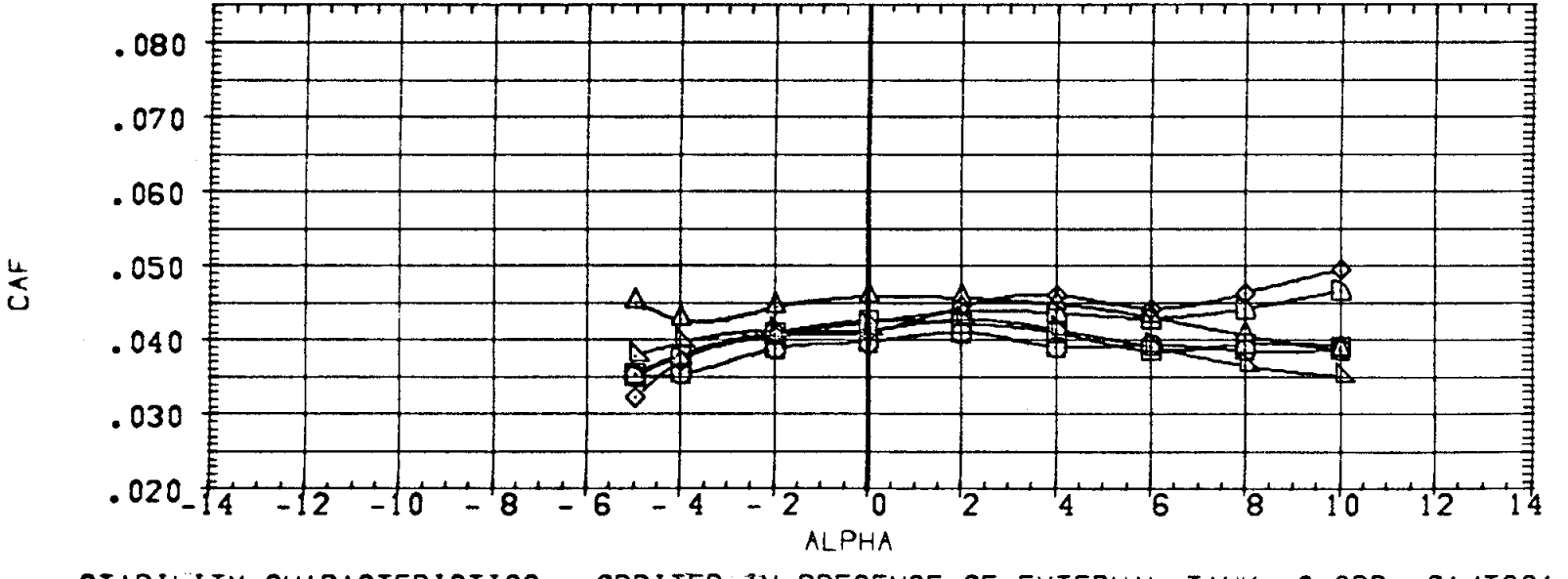
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72022)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72023)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(A72025)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	-.624
(A72026)	◁	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	-.624
(A72027)	▷	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



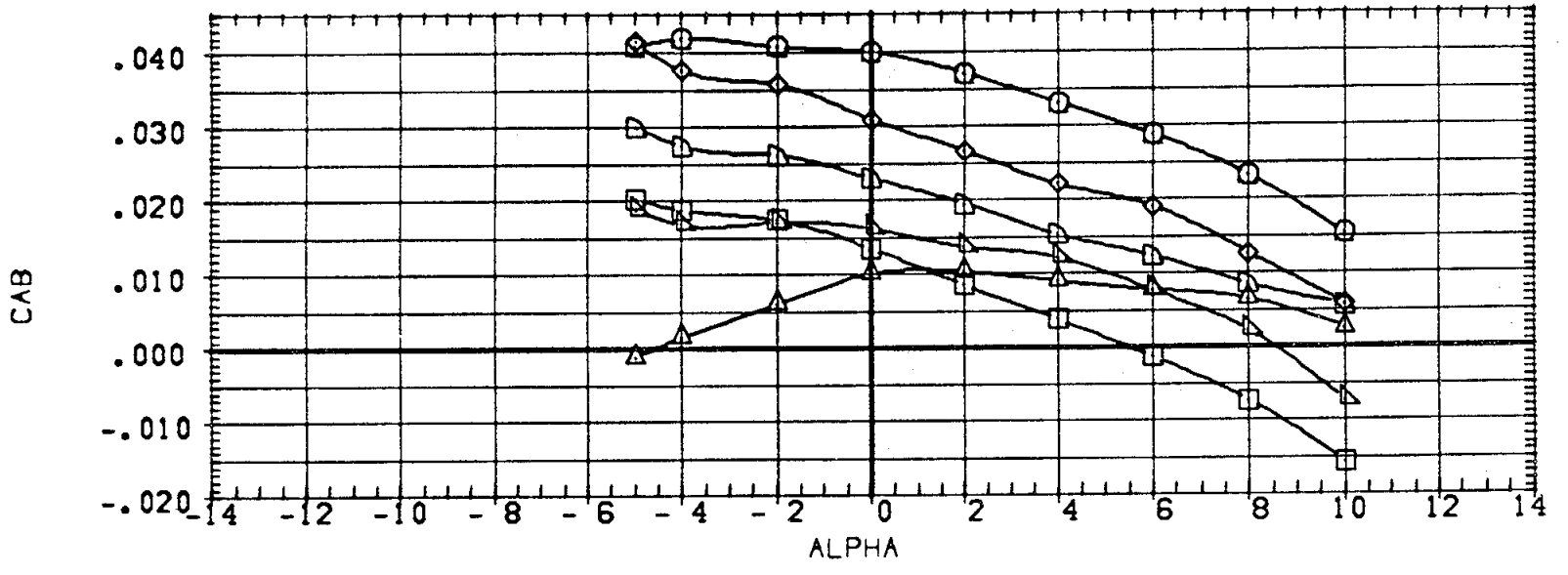


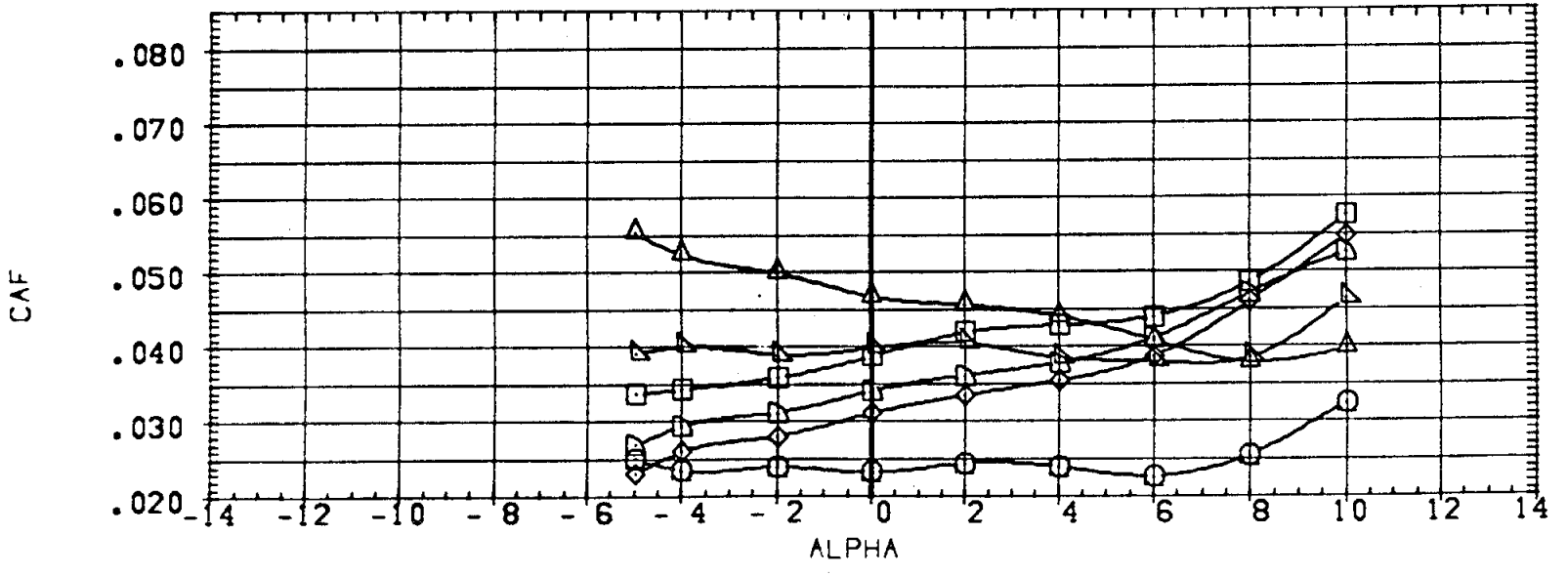
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72022)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72023)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(A72025)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	-.624
(A72026)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	-.624
(A72027)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



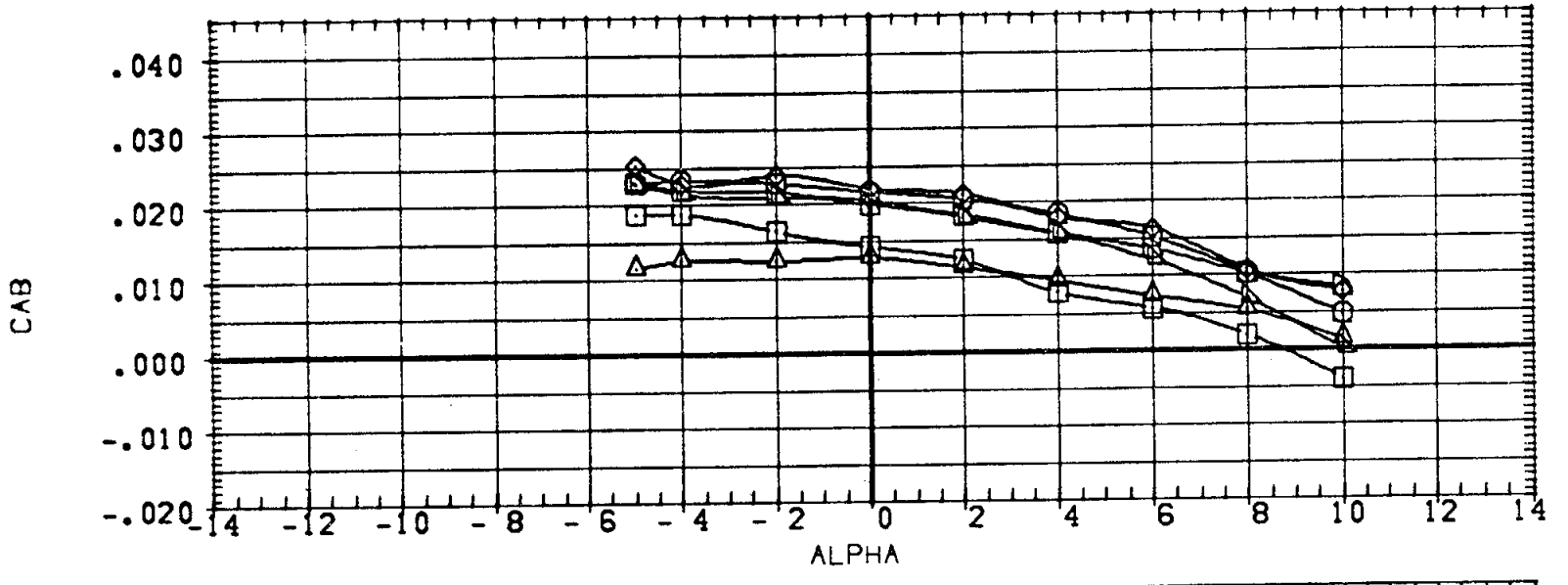


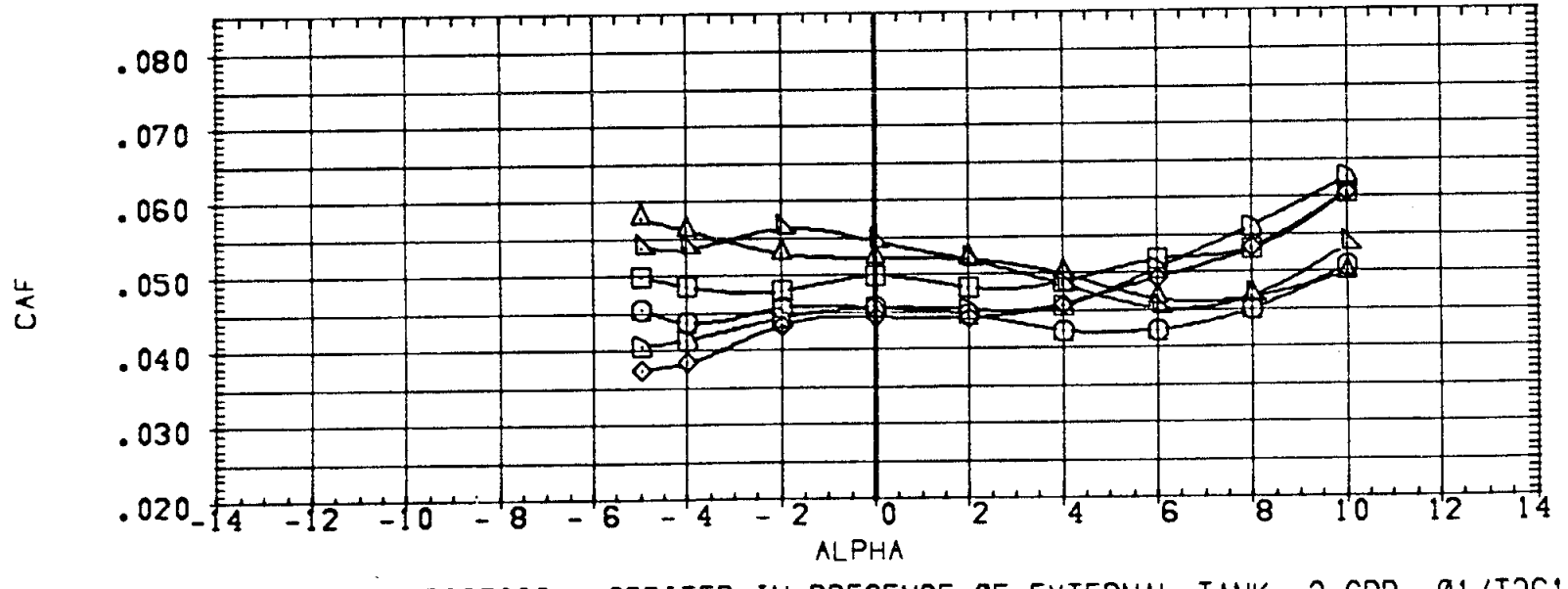
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72022)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72023)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72024)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(A72025)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	-.624
(A72026)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	-.624
(A72027)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



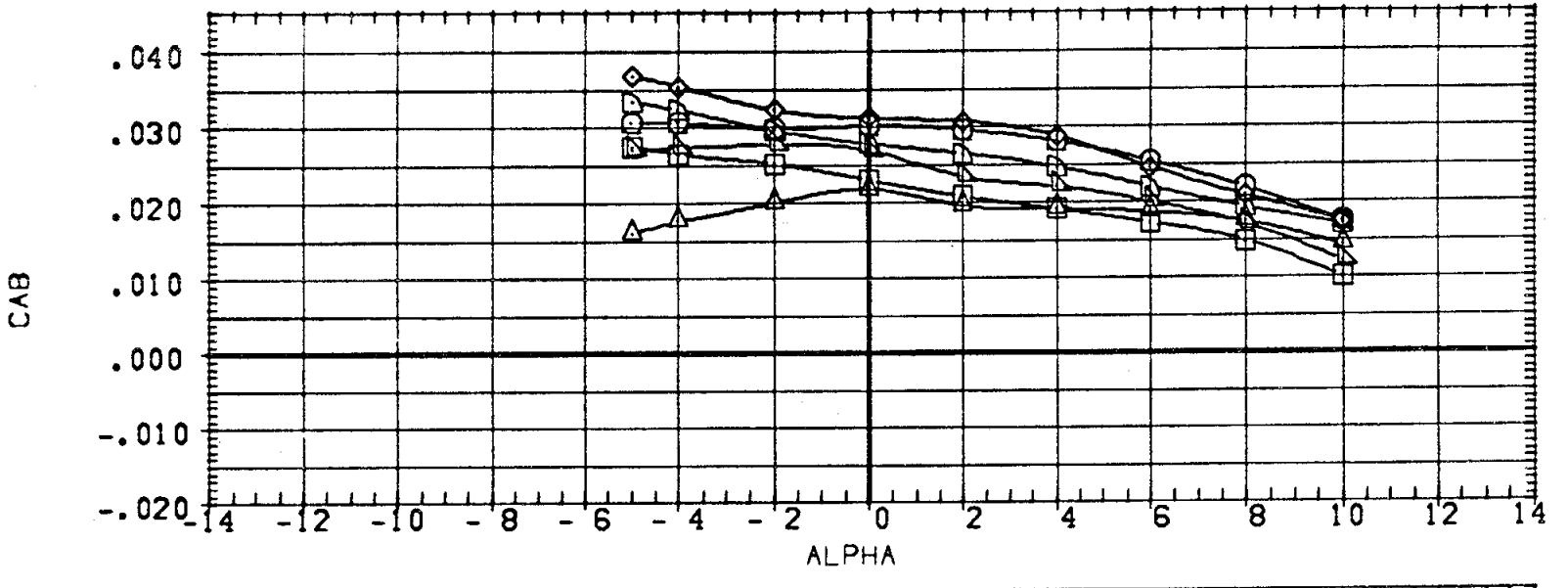


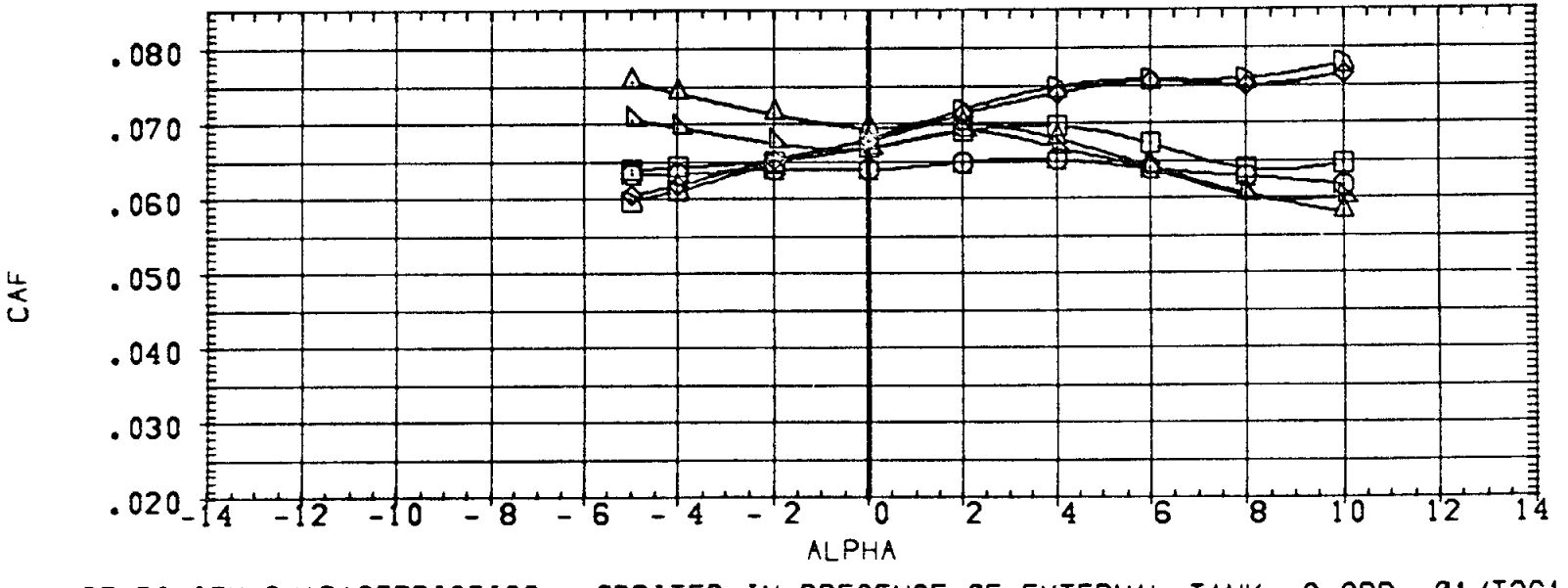
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72022)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72023)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(A72025)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	-.624
(A72026)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	-.624
(A72027)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



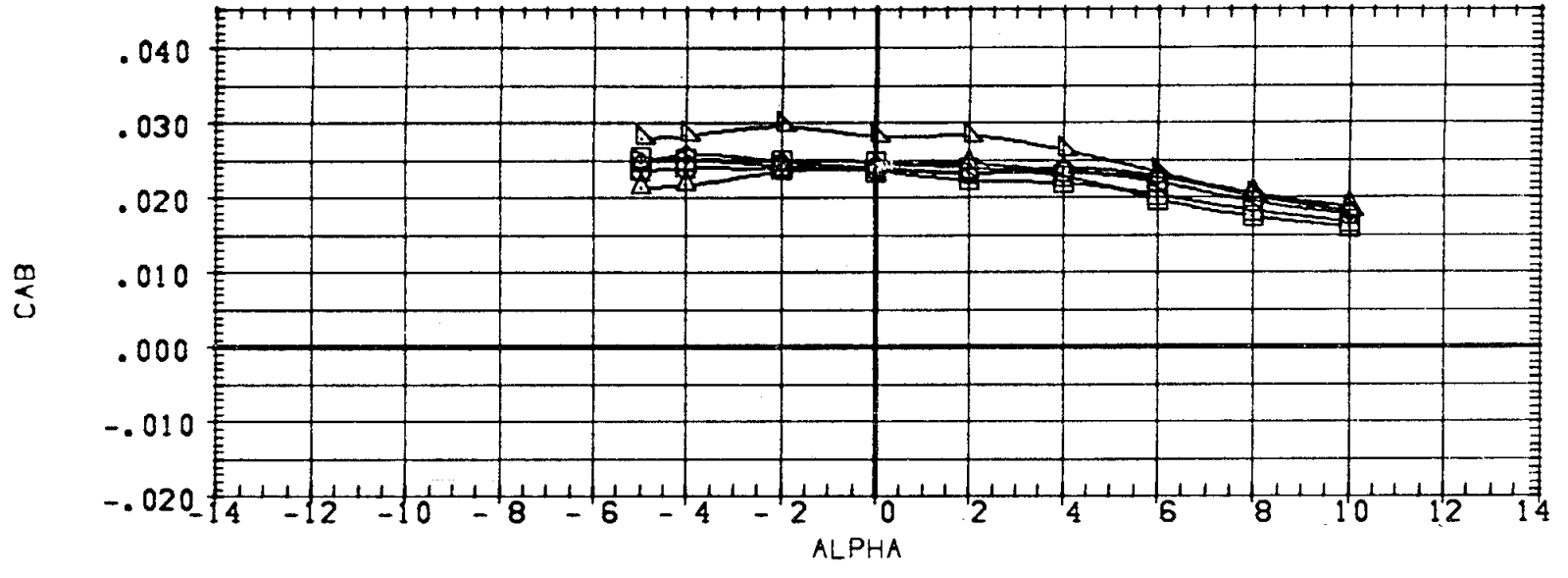


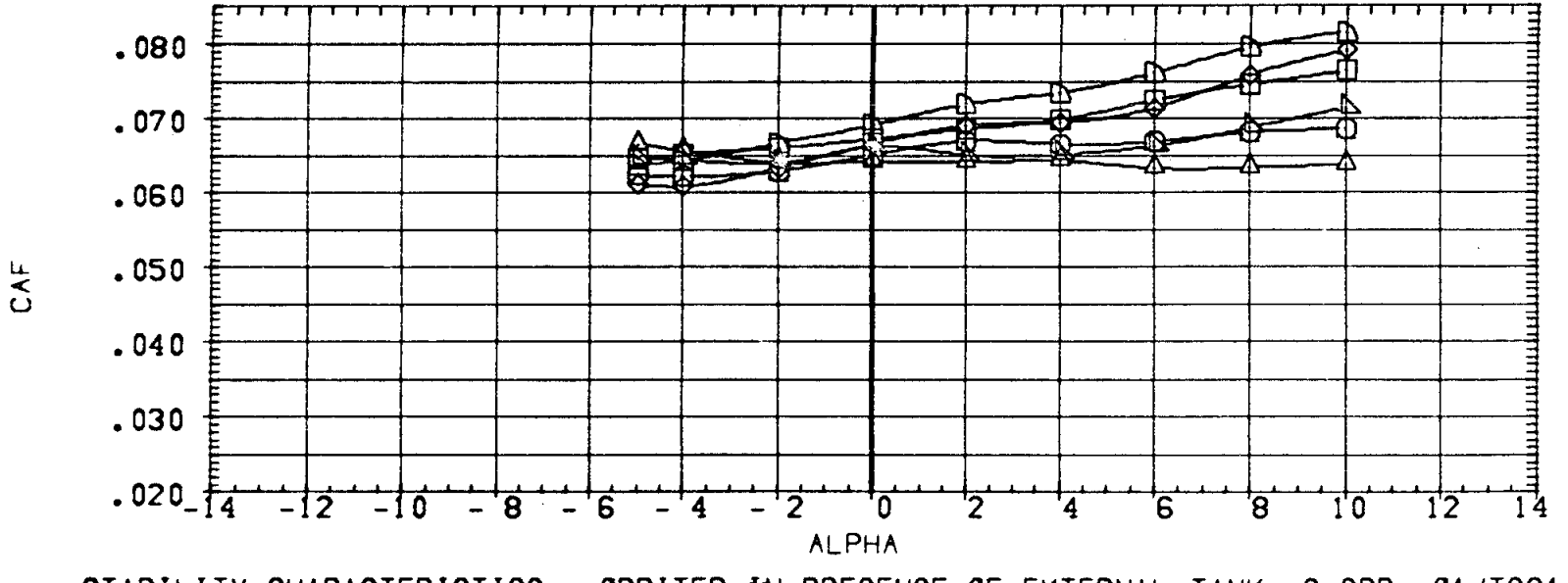
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72022)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	-.624
(A72023)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72024)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.120	10.000	-.624
(A72025)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.240	10.000	-.624
(A72026)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.240	10.000	-.624
(A72027)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



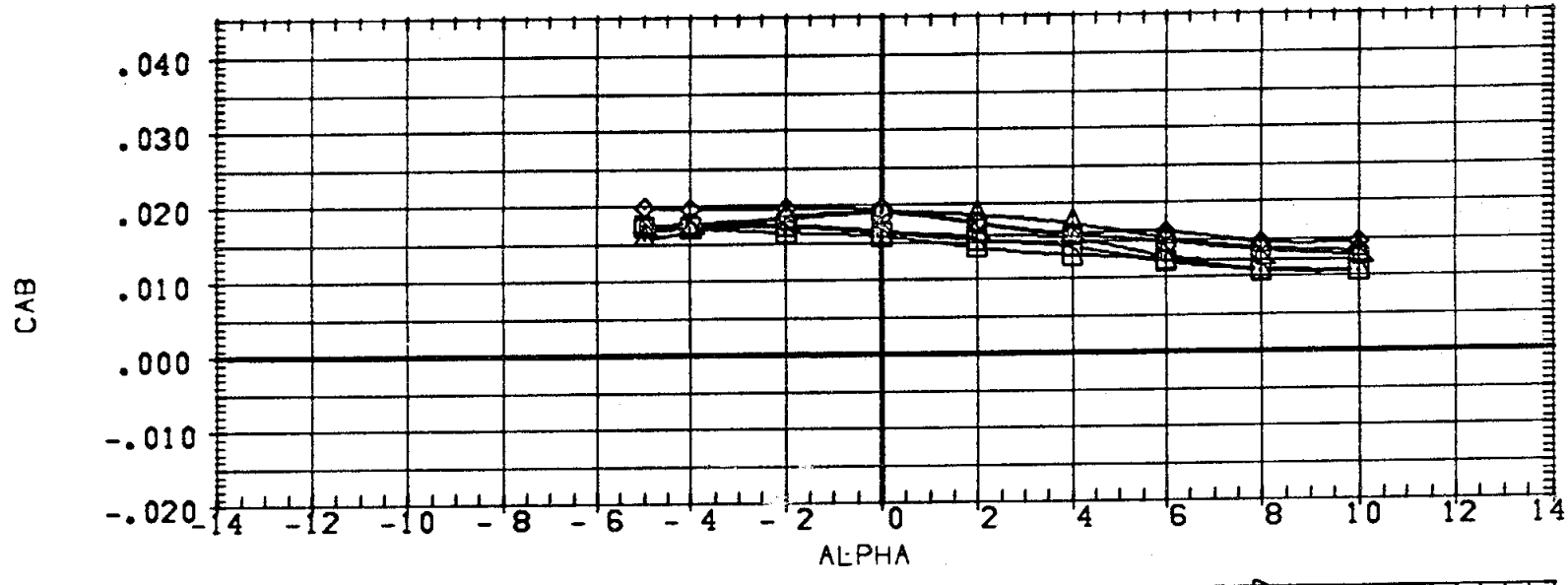


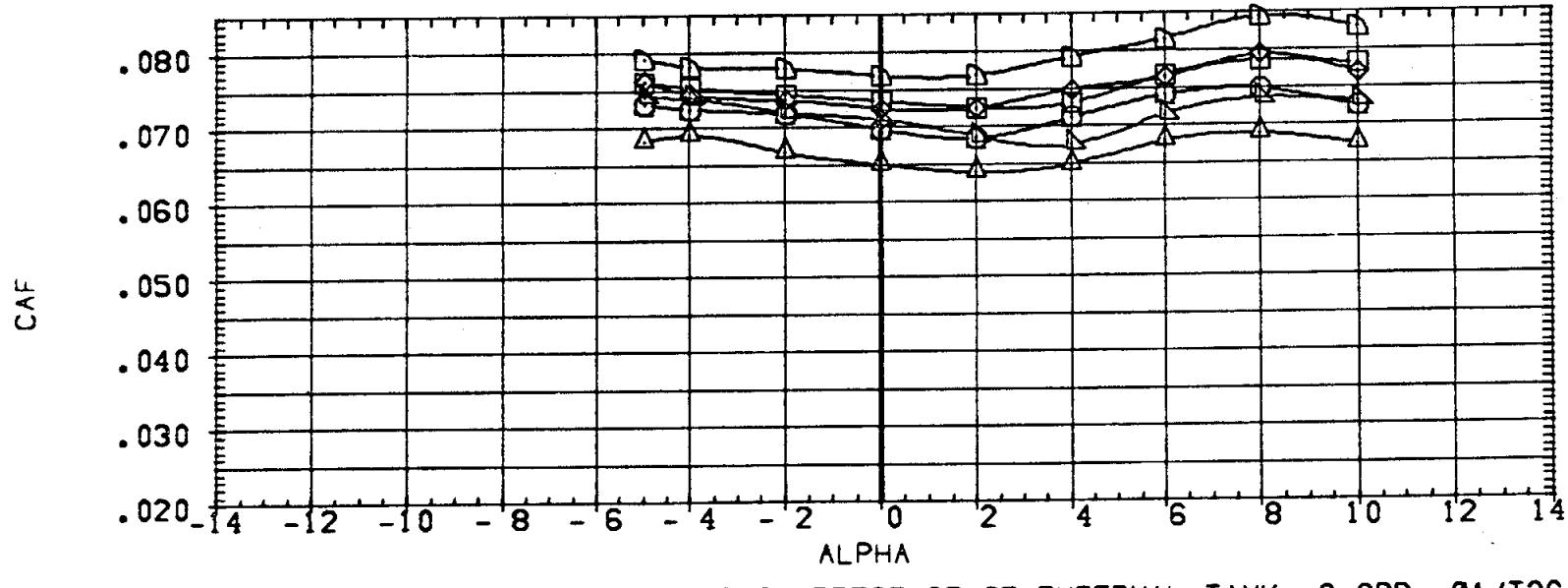
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72022)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72024)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(A72025)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.240	10.000	-.624
(A72026)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.240	10.000	-.624
(A72027)	⬠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



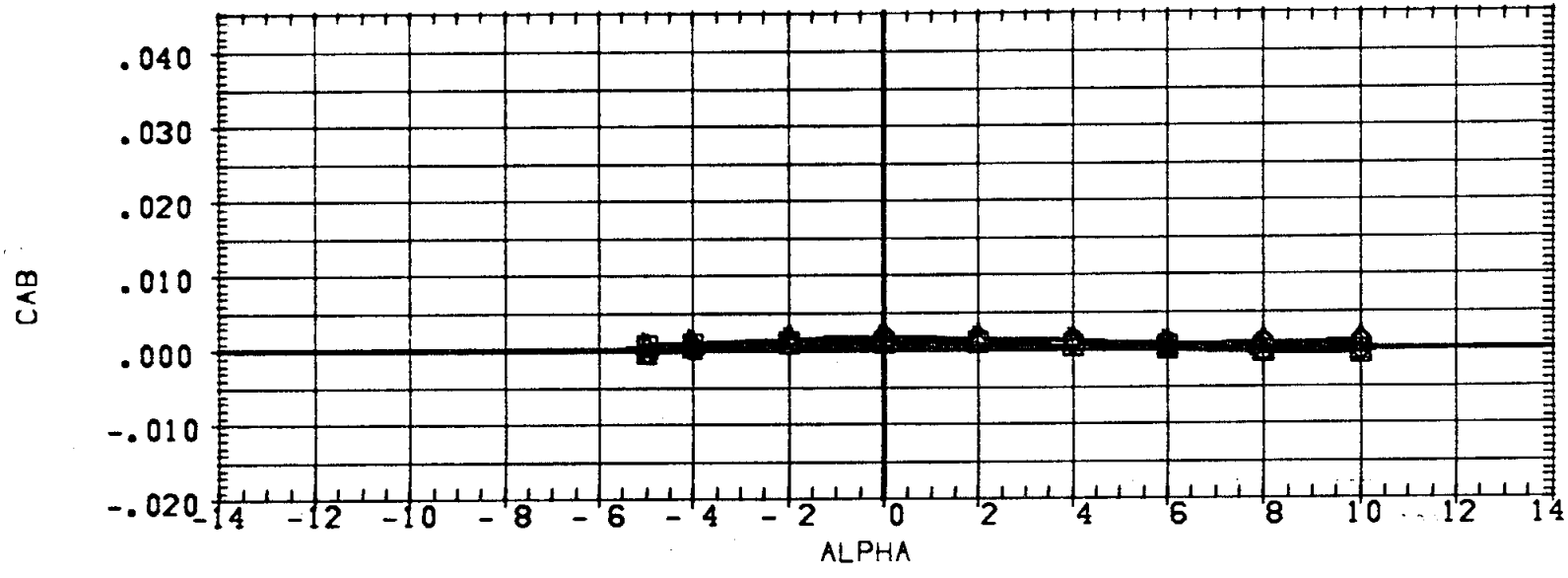


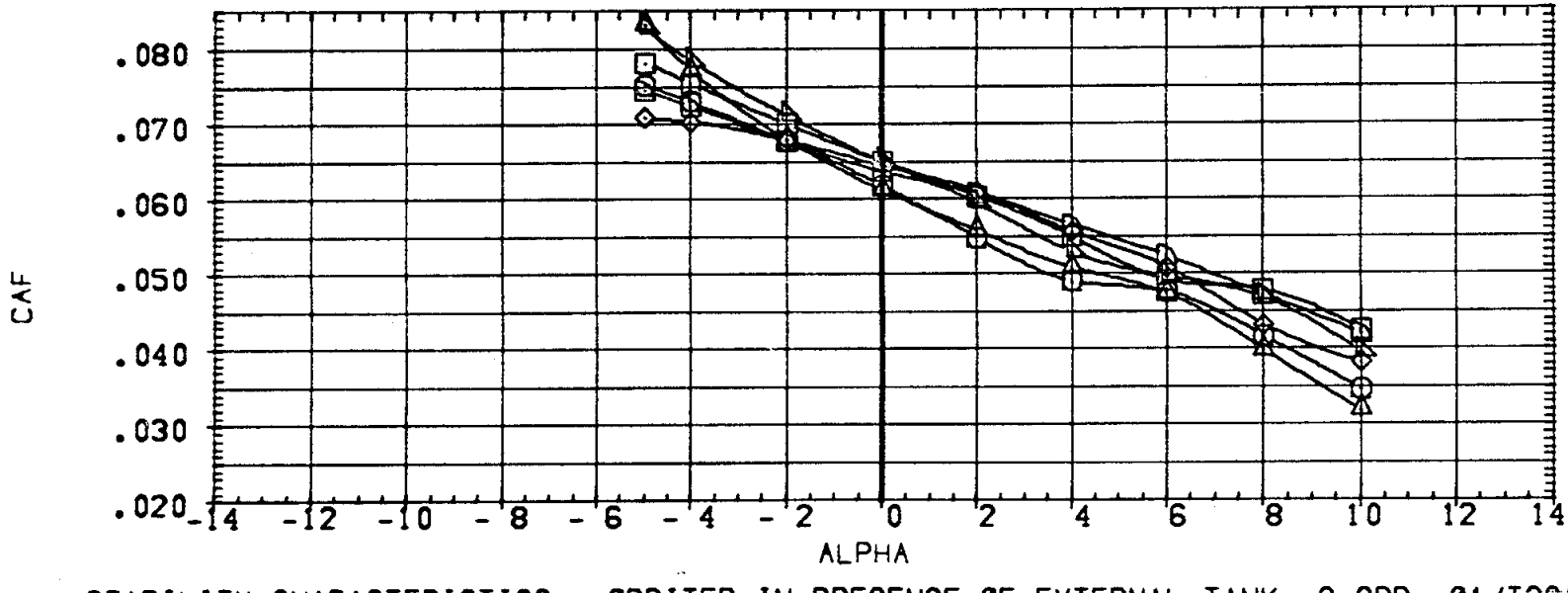
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72022)	○	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	-.624
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72024)	□	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.120	10.000	-.624
(A72025)	◇	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.240	10.000	-.624
(A72026)	▽	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.240	10.000	-.624
(A72027)	⬠	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



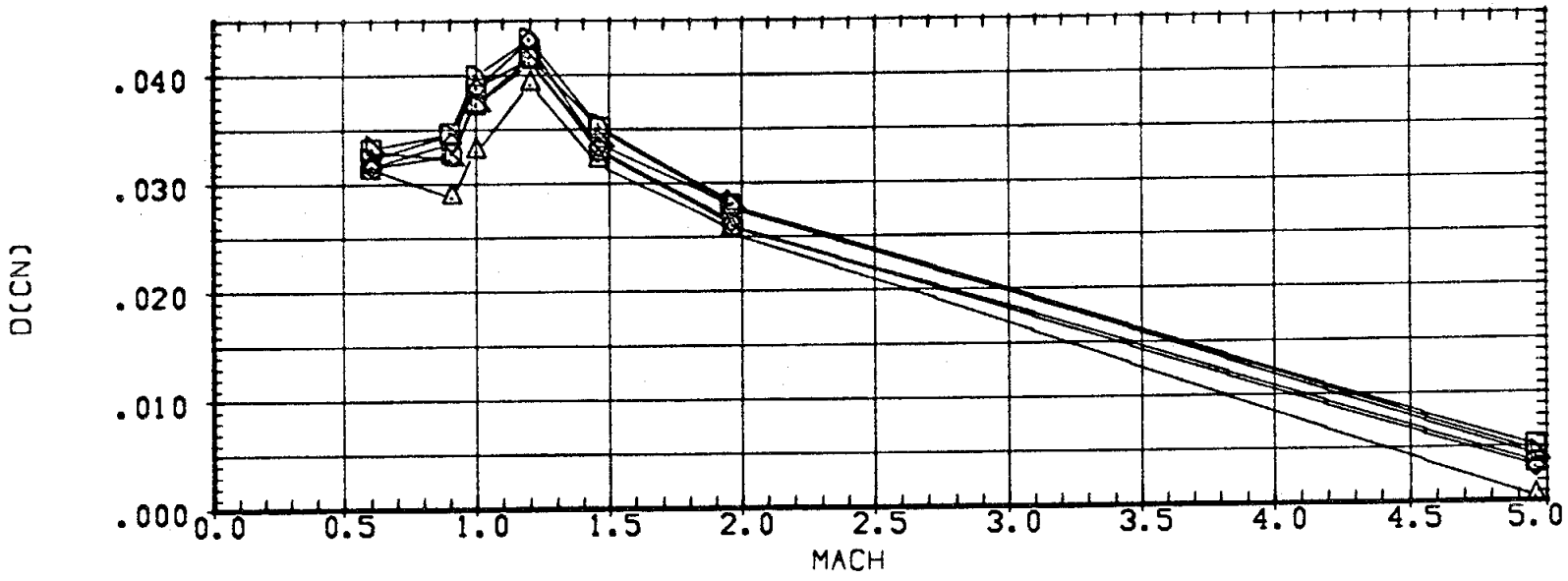


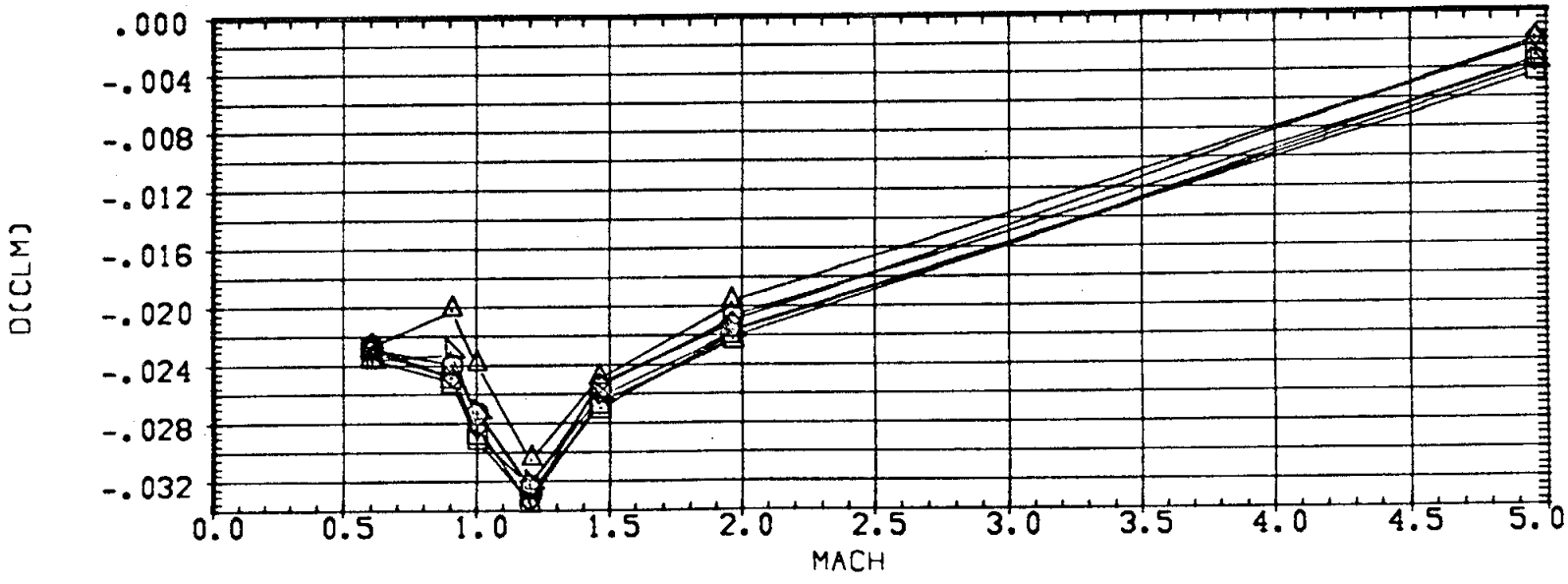
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872022)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	-.624
(872023)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.120	10.000	-.624
(872024)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.120	10.000	-.624
(872025)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.240	10.000	-.624
(872026)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.240	10.000	-.624
(872027)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

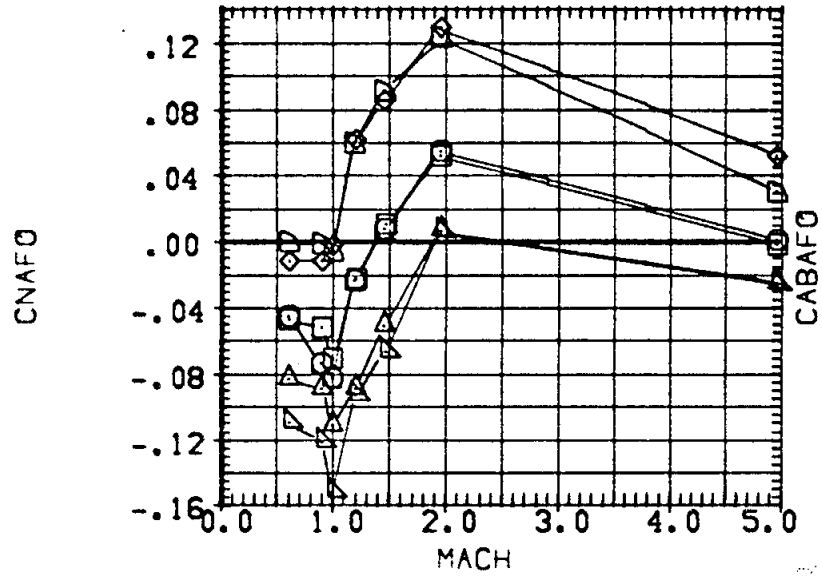


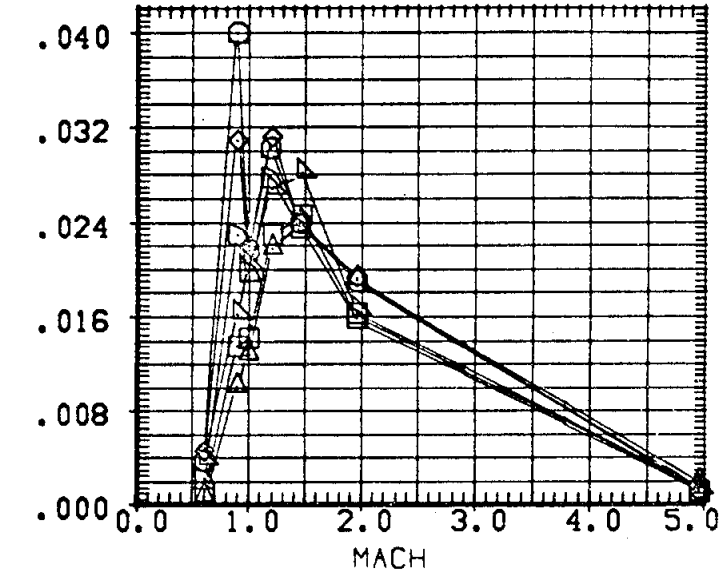


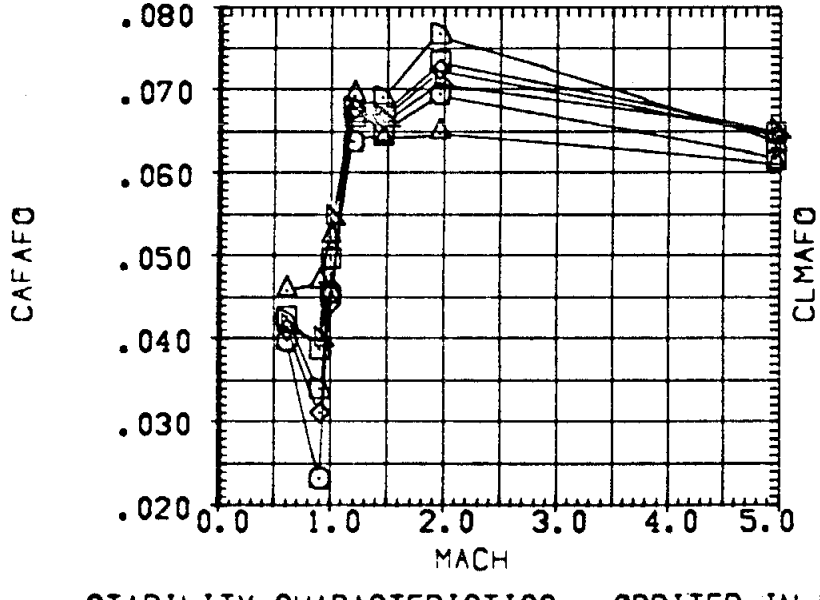
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

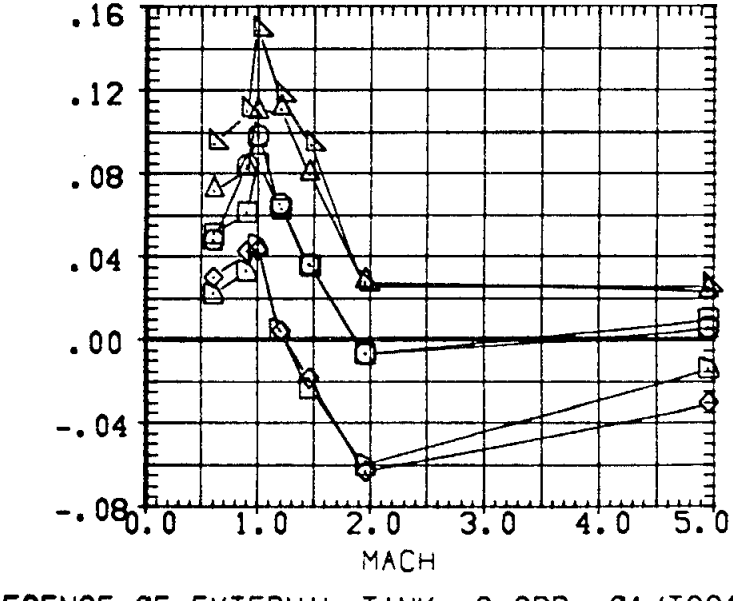
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872022)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	-.624
(872023)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.120	10.000	-.624
(872024)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.120	10.000	-.624
(872025)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.240	10.000	-.624
(872026)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	-1.200	.240	10.000	-.624
(872027)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT









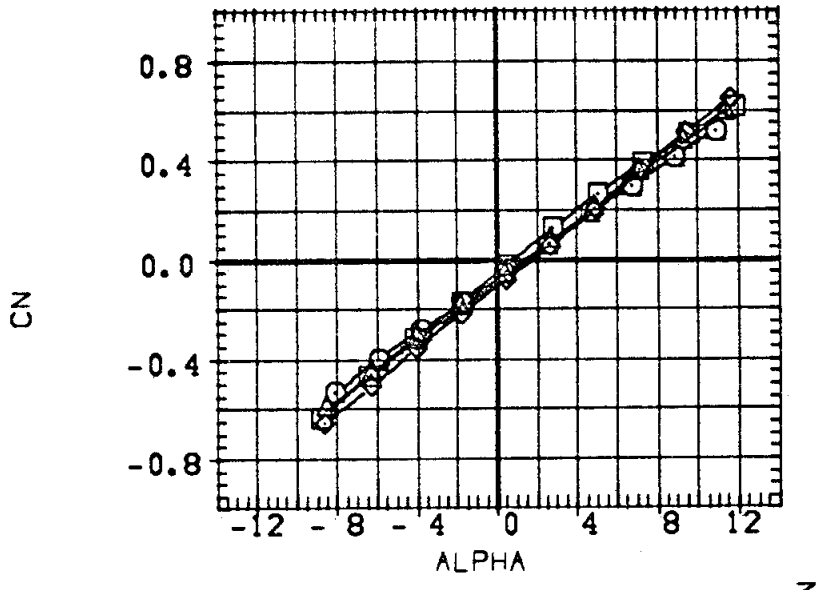
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

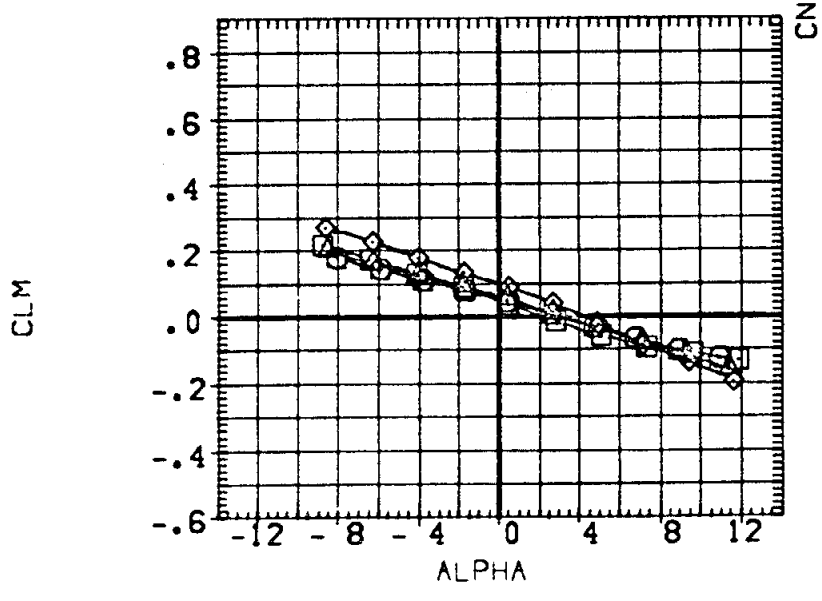
MSFC 545 (IA1) MOD ATP LV-(01)(T5)(S1) (A72301)

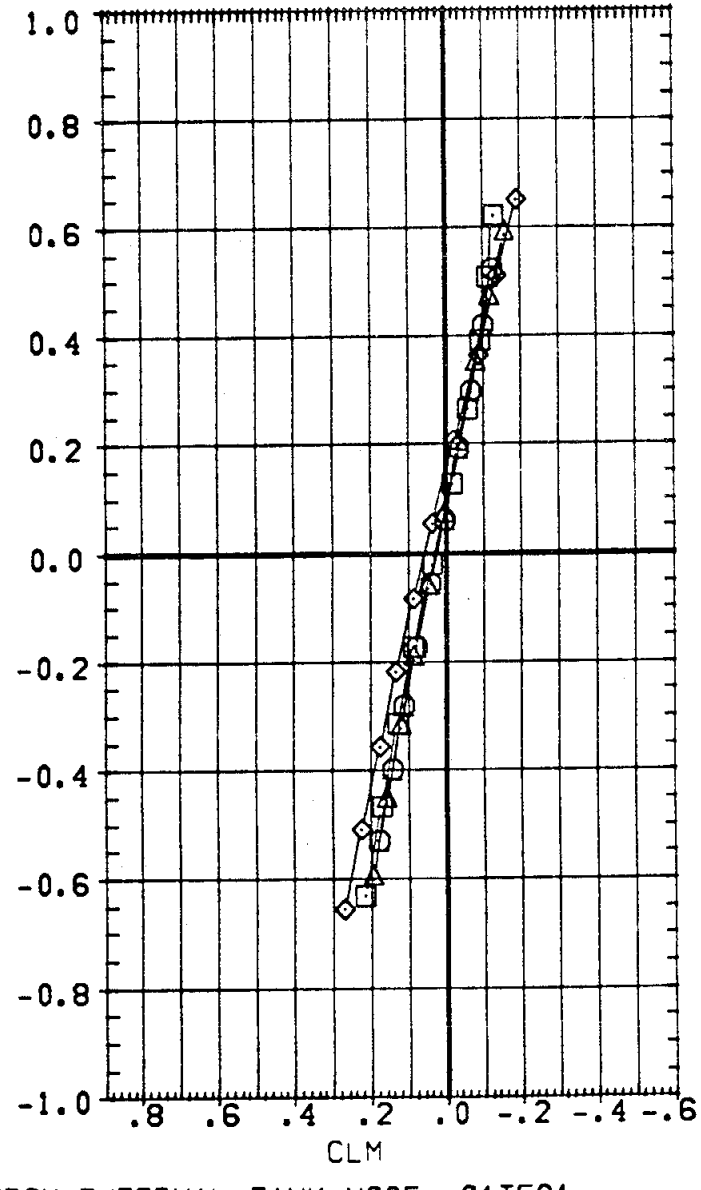
SYMBOL	MACH		PARAMETRIC VALUES		
○	.601	BETA	.000	CONFIG	5.000
△	.901	RUDDER	.000	AILRON	.000
◇	.991	ORBINC	.000	DELTAZ	.120
□	1.192	RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







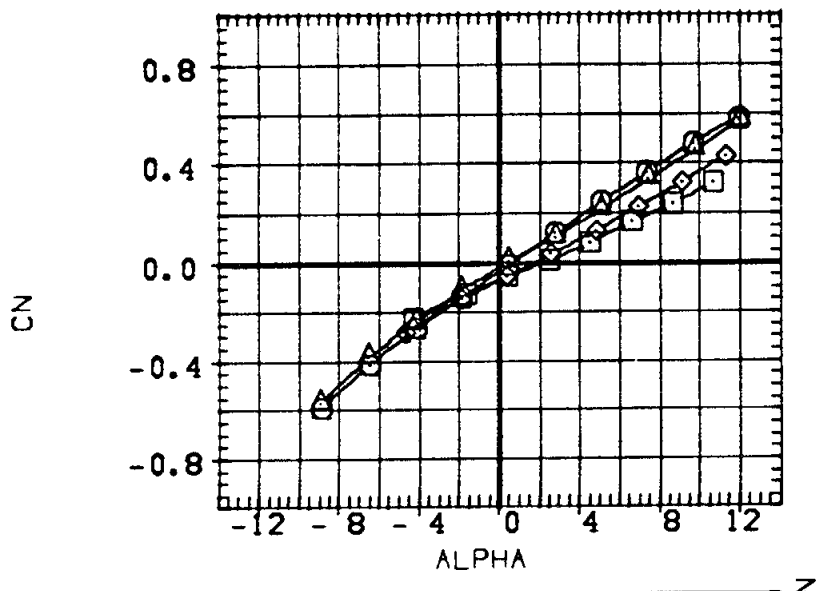
STABILITY CHARACTERISTICS - RETRO REMOVED FROM EXTERNAL TANK NOSE, 01T5S1

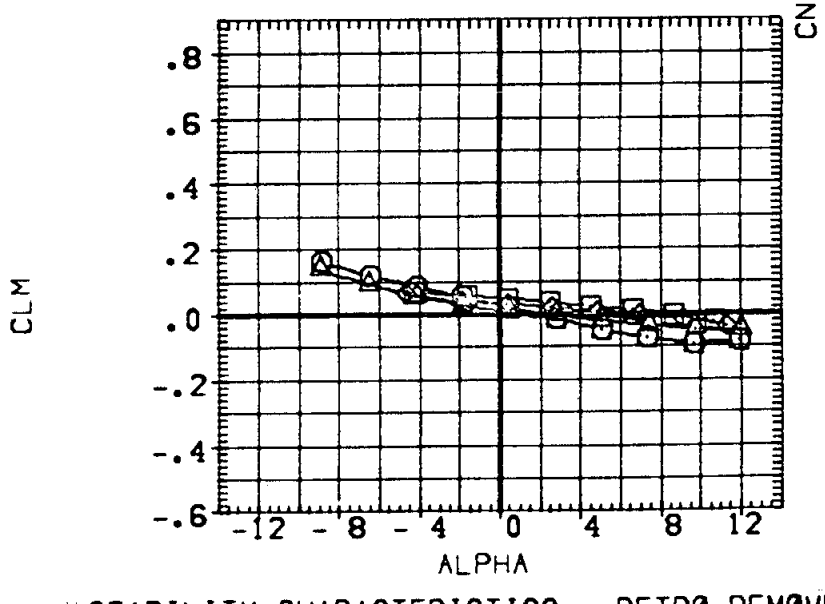
MSFC 545 (IA1) MOD ATP LV-(01)(T5)(S1) (A72301)

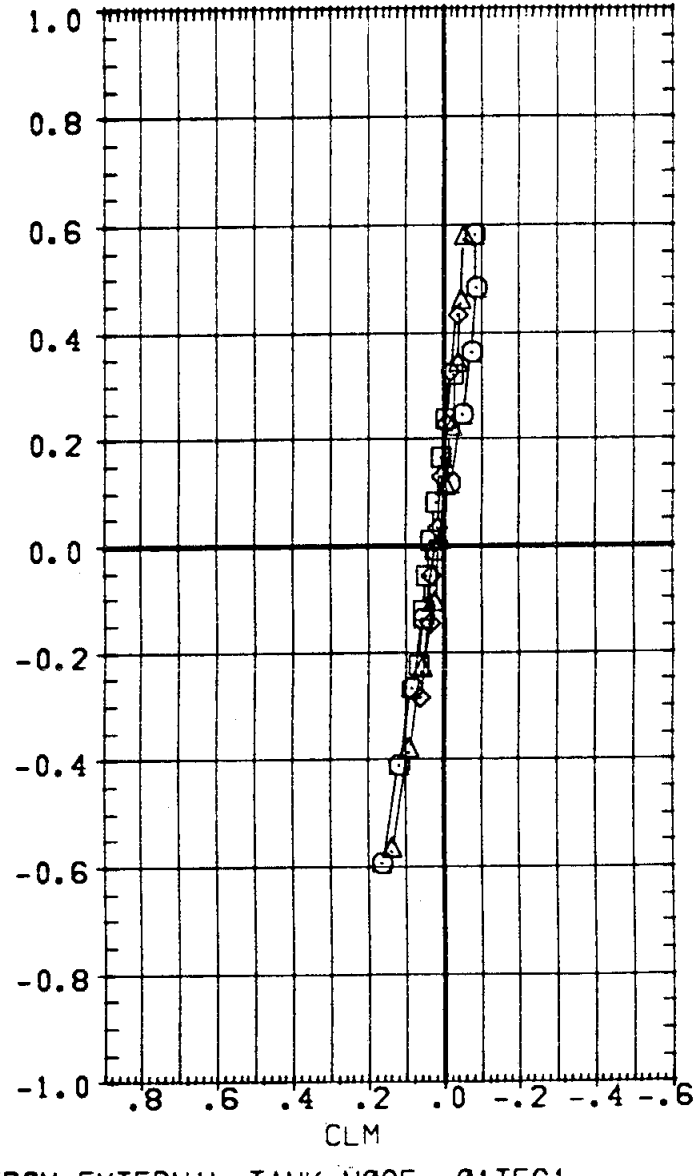
SYMBOL	MACH		PARAMETRIC VALUES		
○	1.463	BETA	.000	CONFIG	5.000
△	1.958	RUDDER	.000	AILRON	.000
◇	2.990	ORBINC	.000	DELTAZ	.120
□	4.960	RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







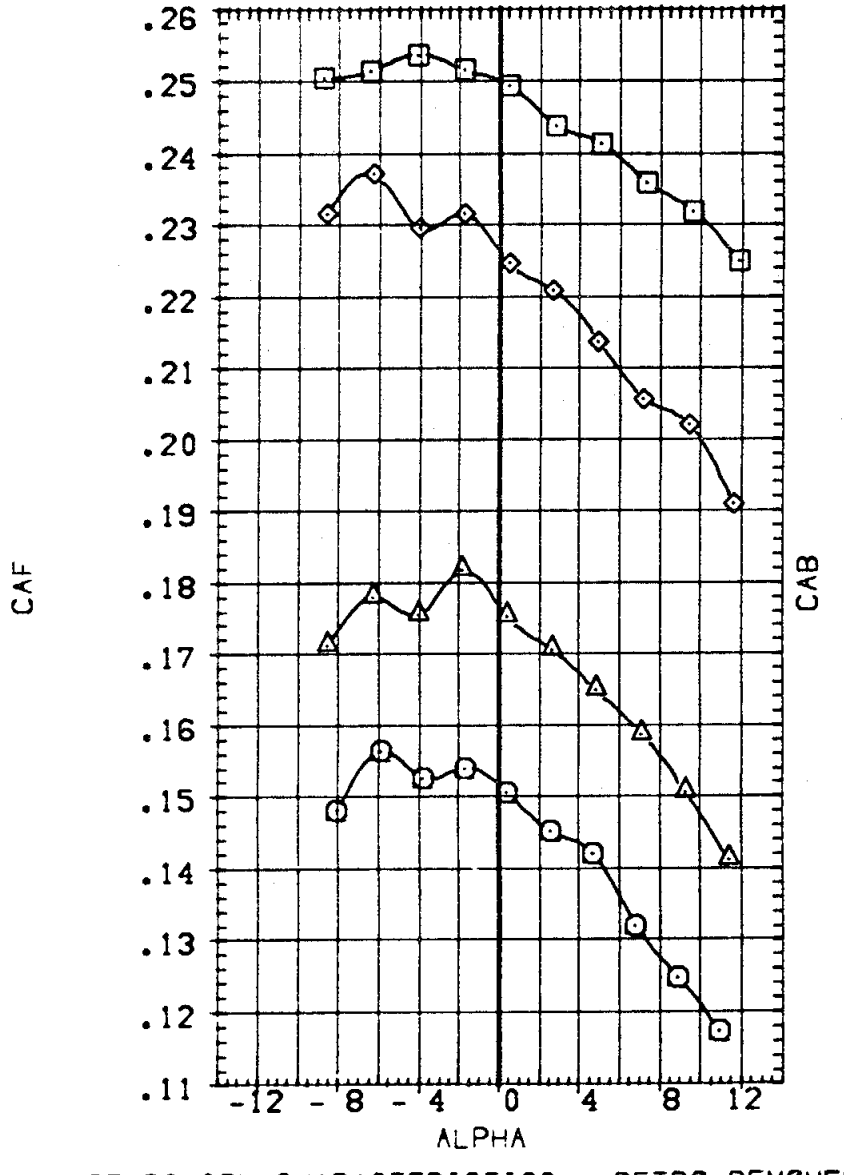
STABILITY CHARACTERISTICS - RETRO REMOVED FROM EXTERNAL TANK NOSE, 01T5S1

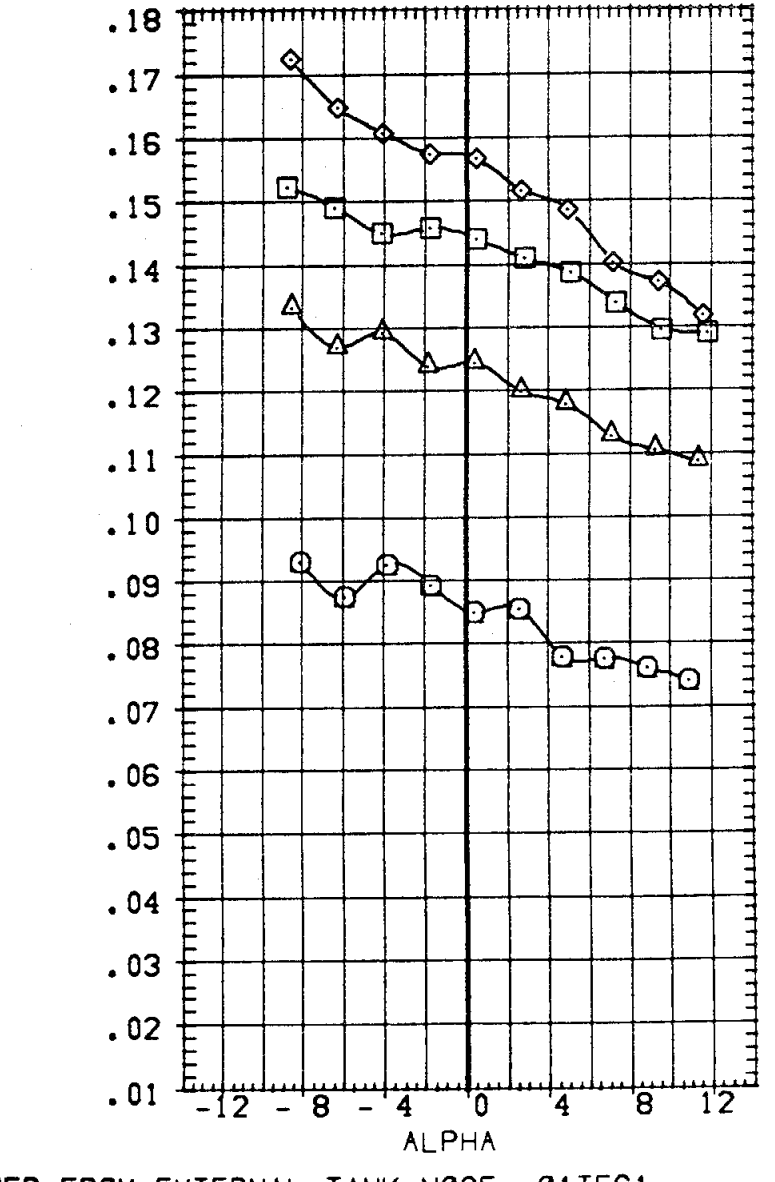
MSFC 545 (IA1) MOD ATP LV-(01)(T5)(S1) (A72301)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.601	BETA	.000	CONFIG	5.000
△	.901	RUDDER	.000	AILRON	.000
◇	.991	ORBINC	.000	DELTAZ	.120
□	1.192	RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





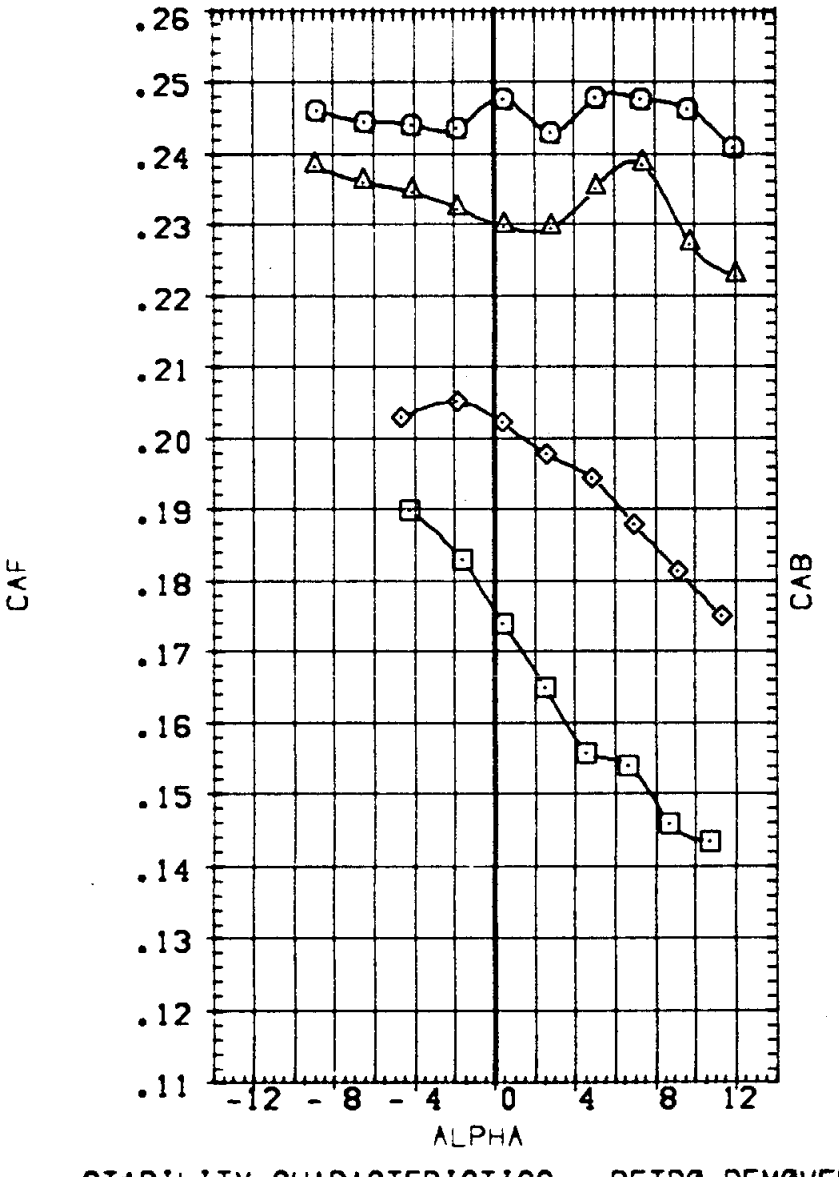
STABILITY CHARACTERISTICS - RETRO REMOVED FROM EXTERNAL TANK NOSE, 01T5S1

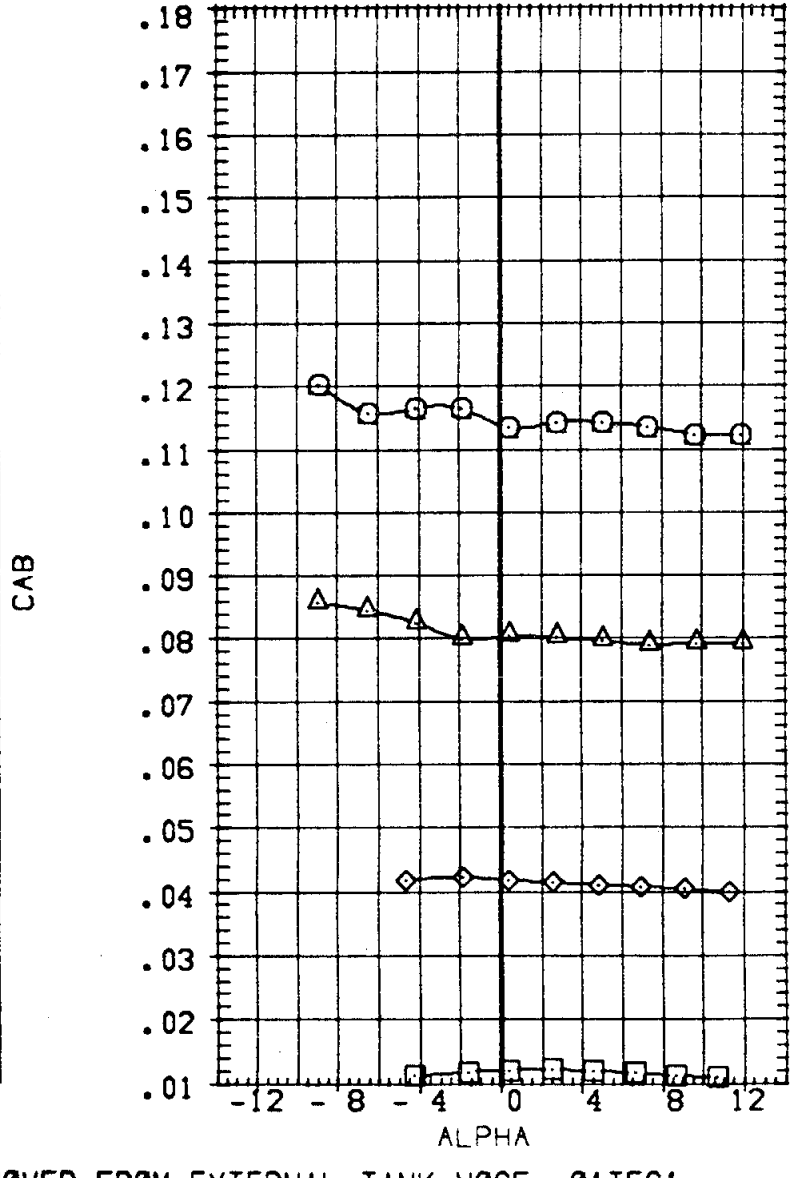
MSFC 545 (1A1) MOD ATP LV-(01)(T5)(S1) (A72301)

SYMBOL	MACH	PARAMETRIC VALUES			
○	1.463	BETA	.000	CONFIG	5.000
△	1.958	RUDDER	.000	AILRON	.000
◇	2.990	ORBINC	.000	DELTAZ	.120
□	4.960	RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - RETRO REMOVED FROM EXTERNAL TANK NOSE, 01T5S1

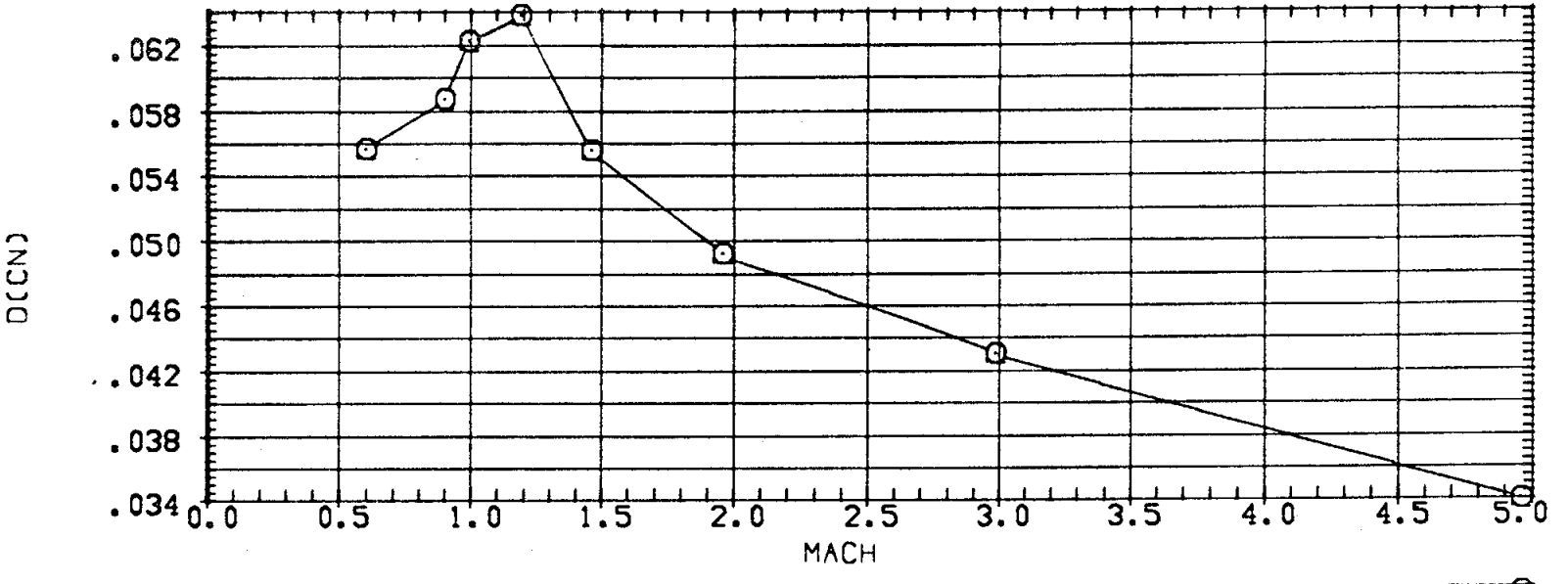
MSFC 545 (1A1) MOD ATP LV-(01)(T5)(S1) (B72301)

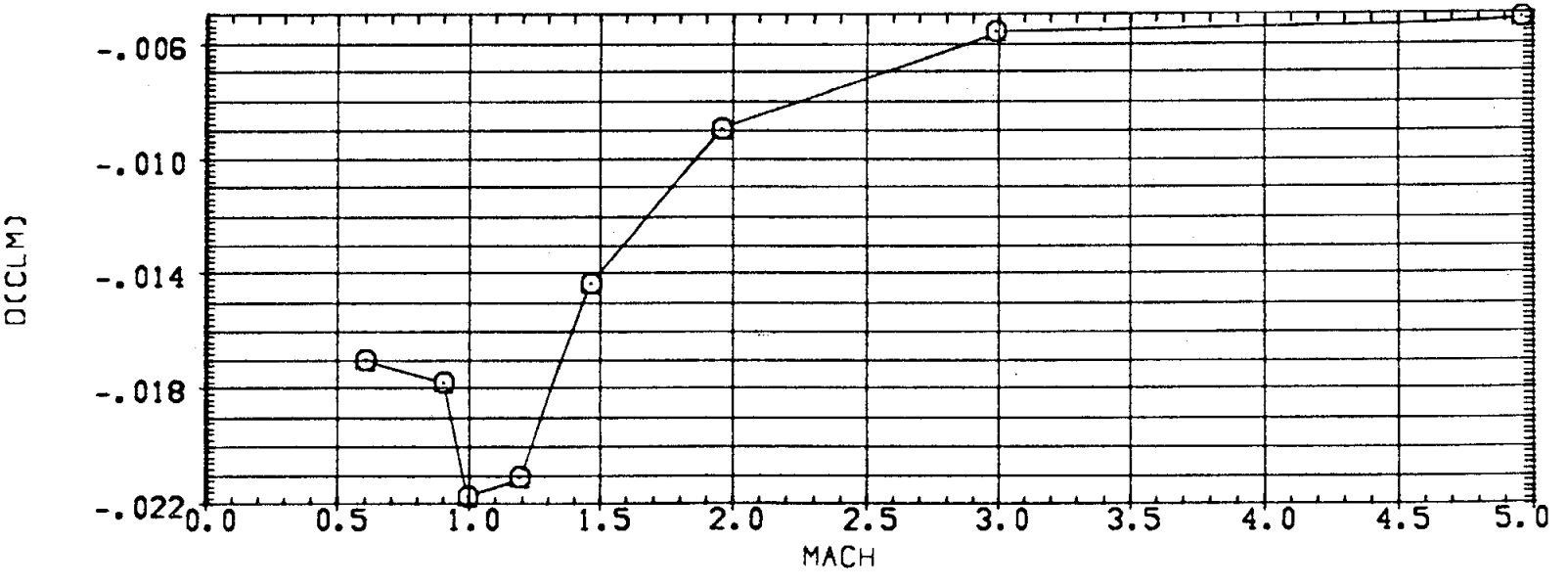
PARAMETRIC VALUES

BETA	.000	CONFIG	5.000
RUDDER	.000	AILRON	.000
ORBINC	.000	DELTAZ	.120
RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

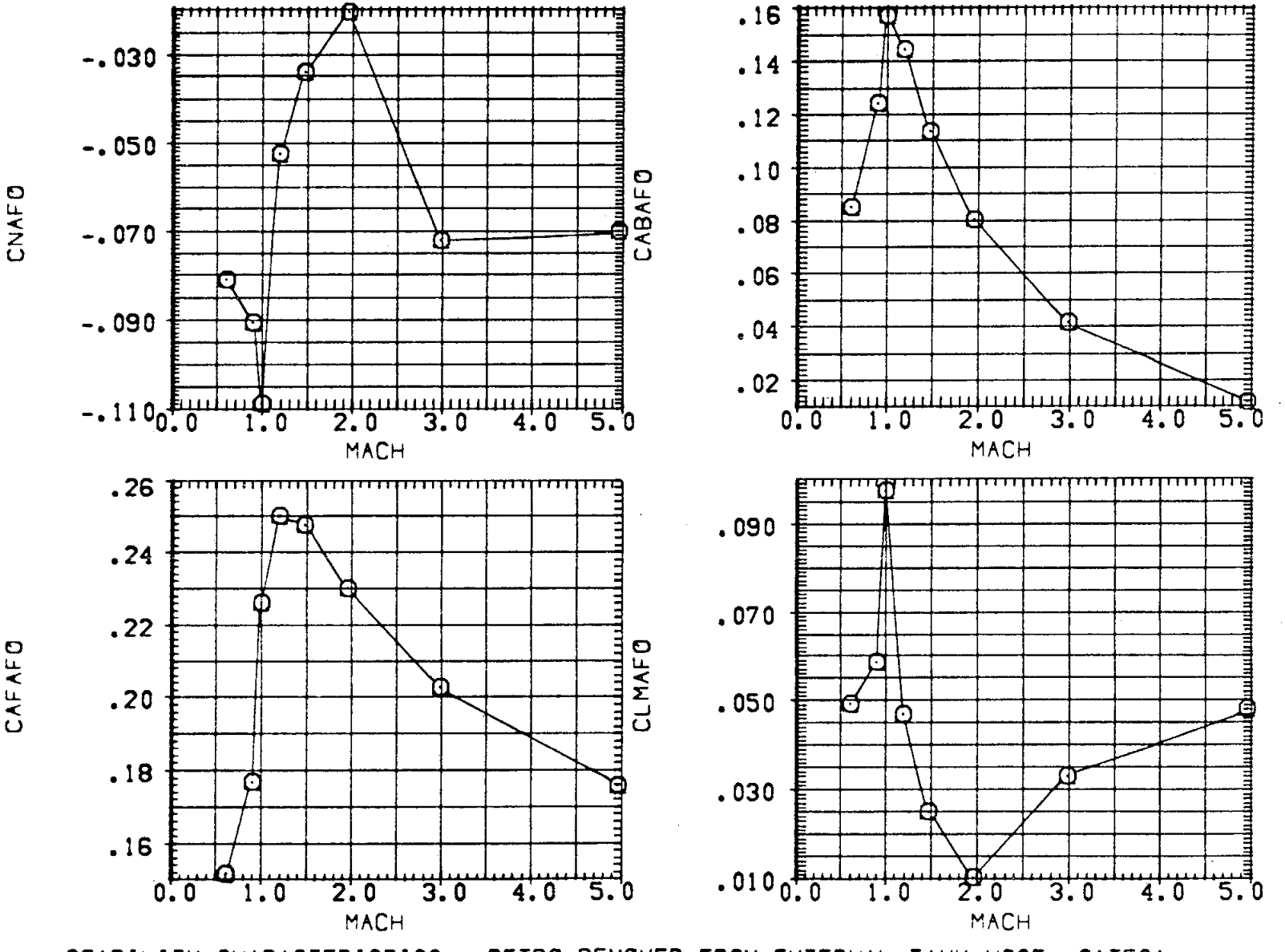




STABILITY CHARACTERISTICS - RETRO REMOVED FROM EXTERNAL TANK NOSE, 01T5S1

PARAMETRIC VALUES			
BETA	.000	CONFIG	5.000
RUDDER	.000	AILRON	.000
ORBINC	.000	DELTAZ	.120
RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

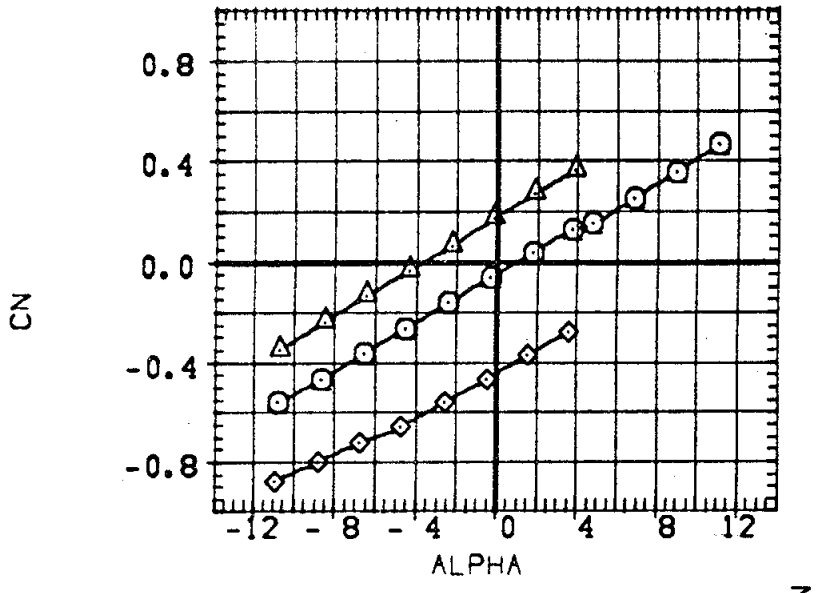


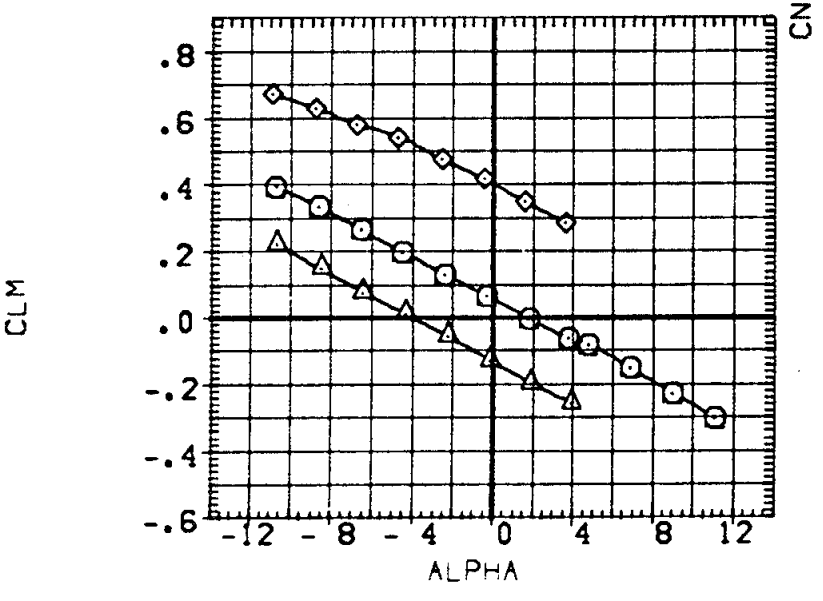
STABILITY CHARACTERISTICS - RETRO REMOVED FROM EXTERNAL TANK NOSE, 01T5S1

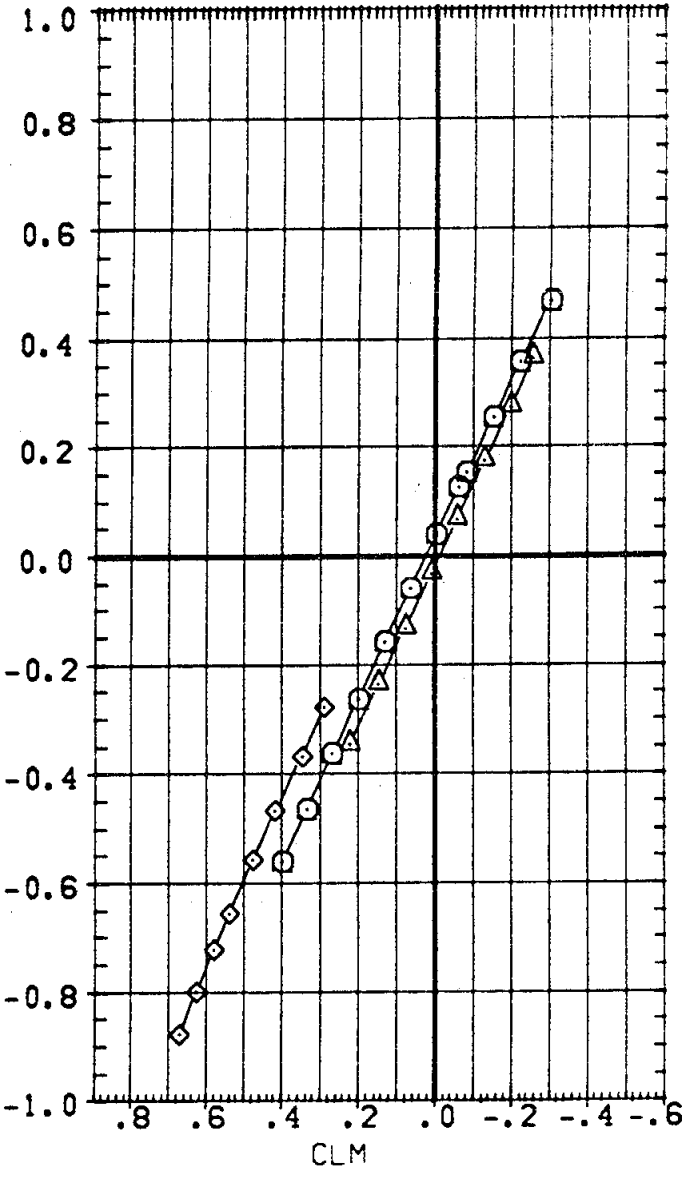
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

RUDDER	AILRON	RUDFLR	ELEVTR
.000	.000	10.000	.000
.000	.000	10.000	10.000
.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







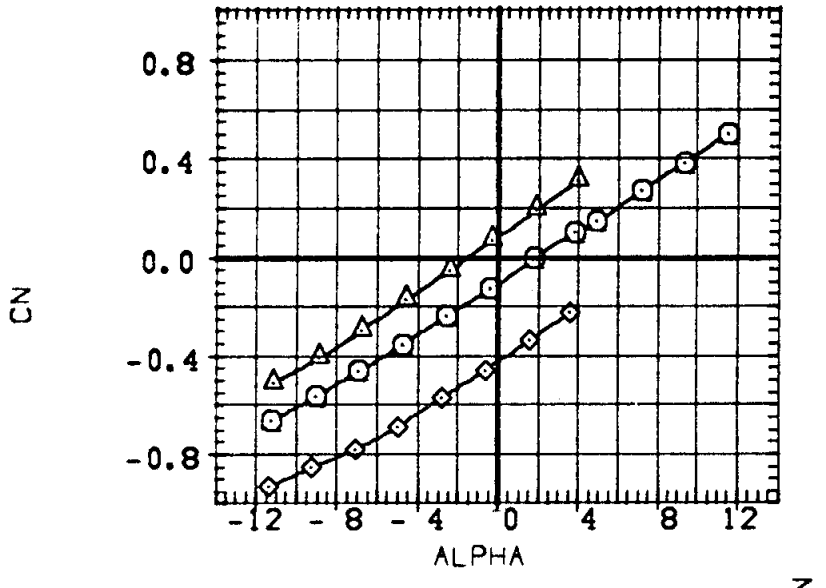
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

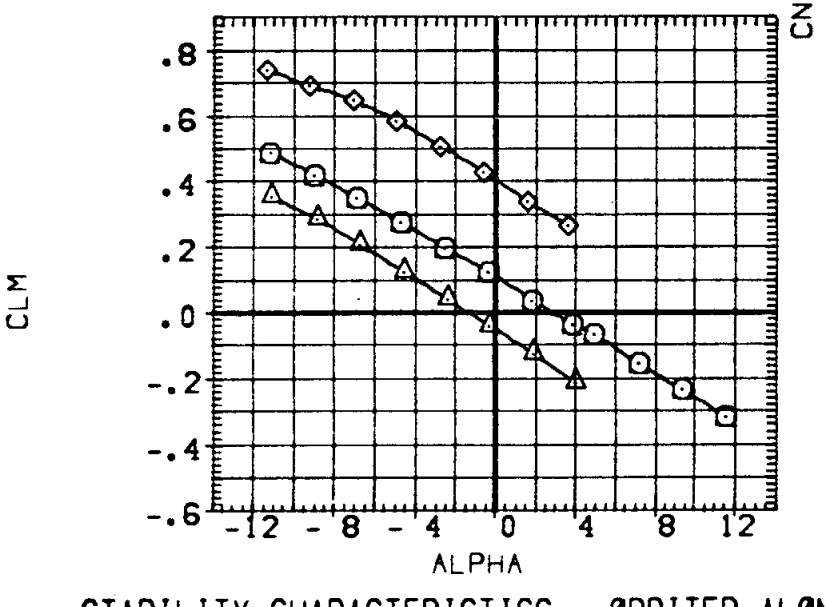
(A)MACH = .60

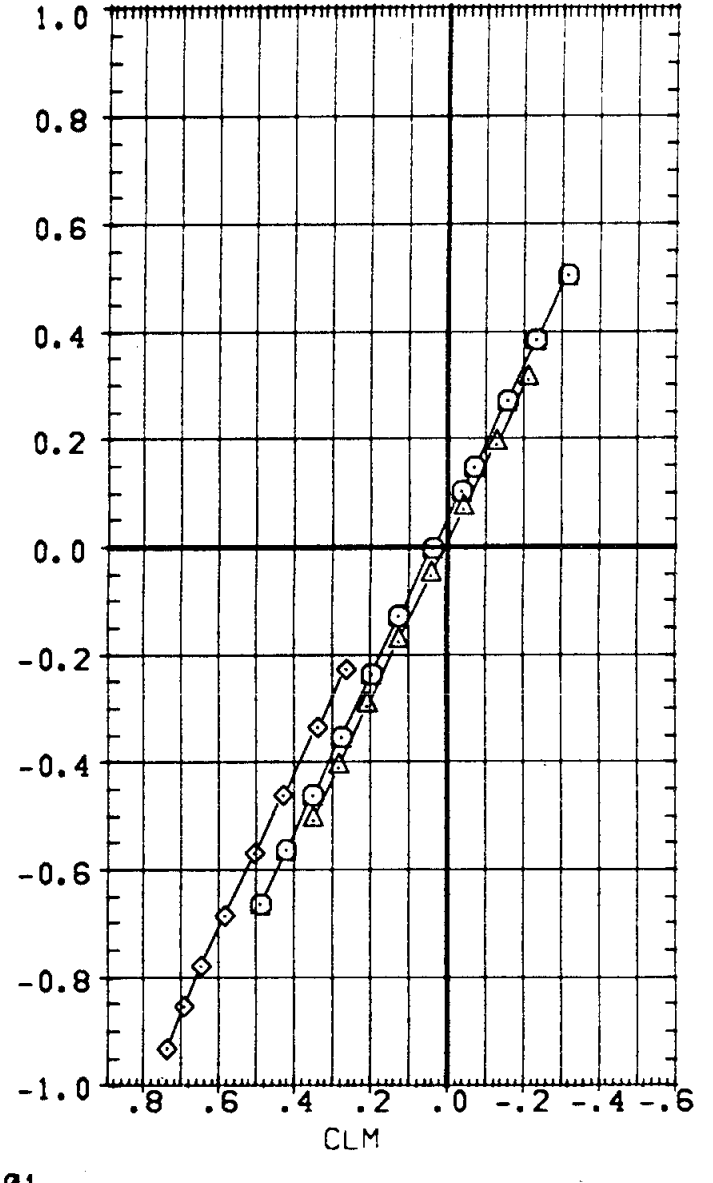
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

RUDDER	AILRON	RUDFLR	ELEVTR
.000	.000	10.000	.000
.000	.000	10.000	10.000
.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







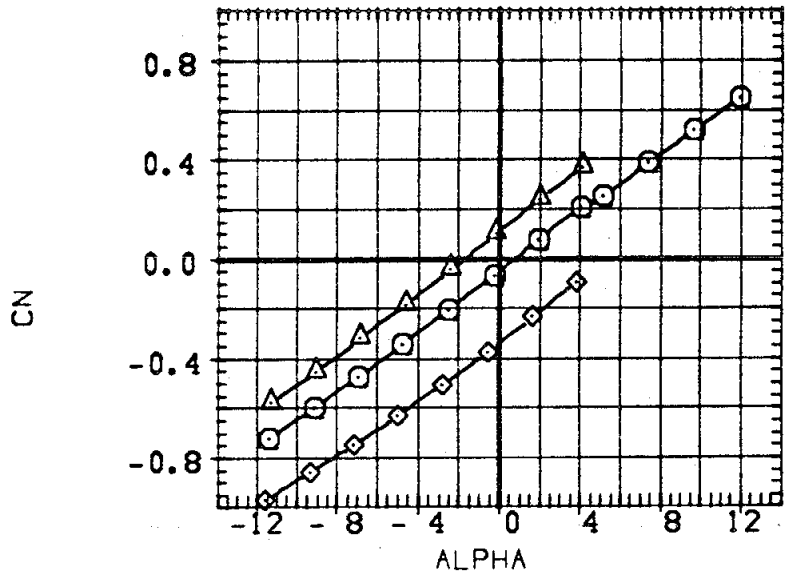
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

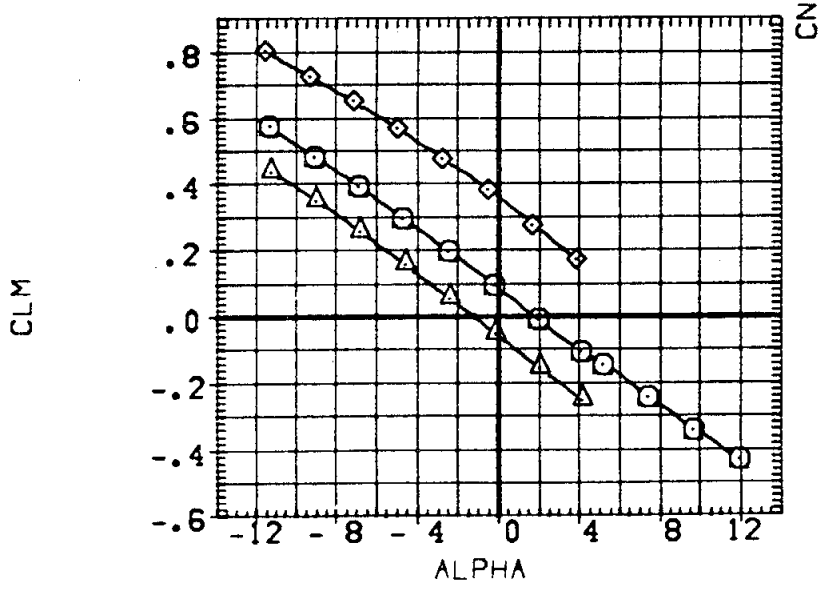
(B)MACH = .90

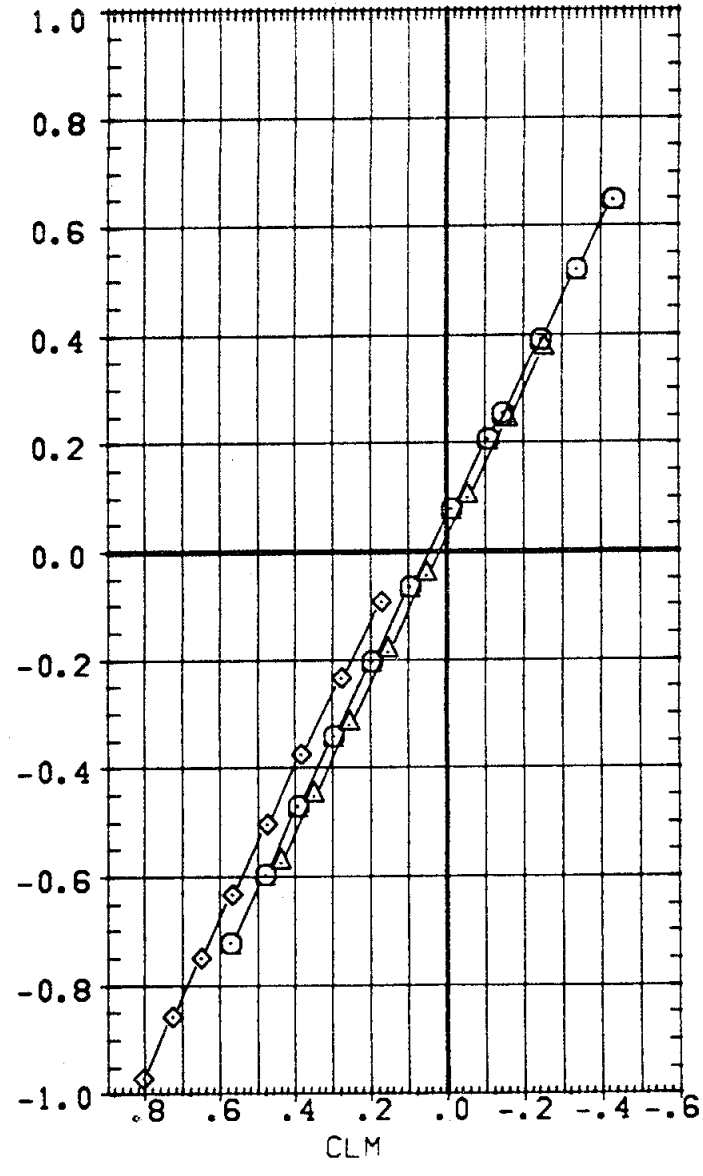
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72502)	☒	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

RUDDER	AILRON	RUDFLR	ELEVTR
.000	.000	10.000	.000
.000	.000	10.000	10.000
.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







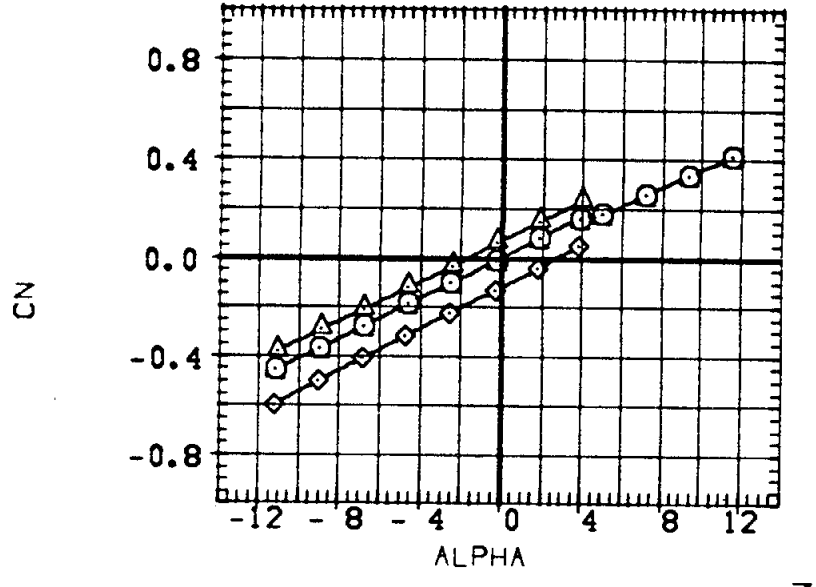
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

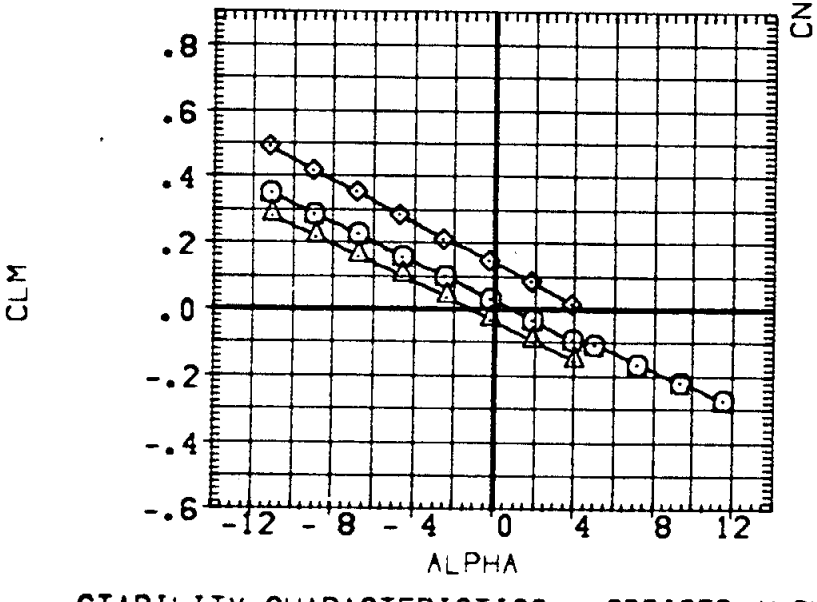
(C)MACH = 1.19

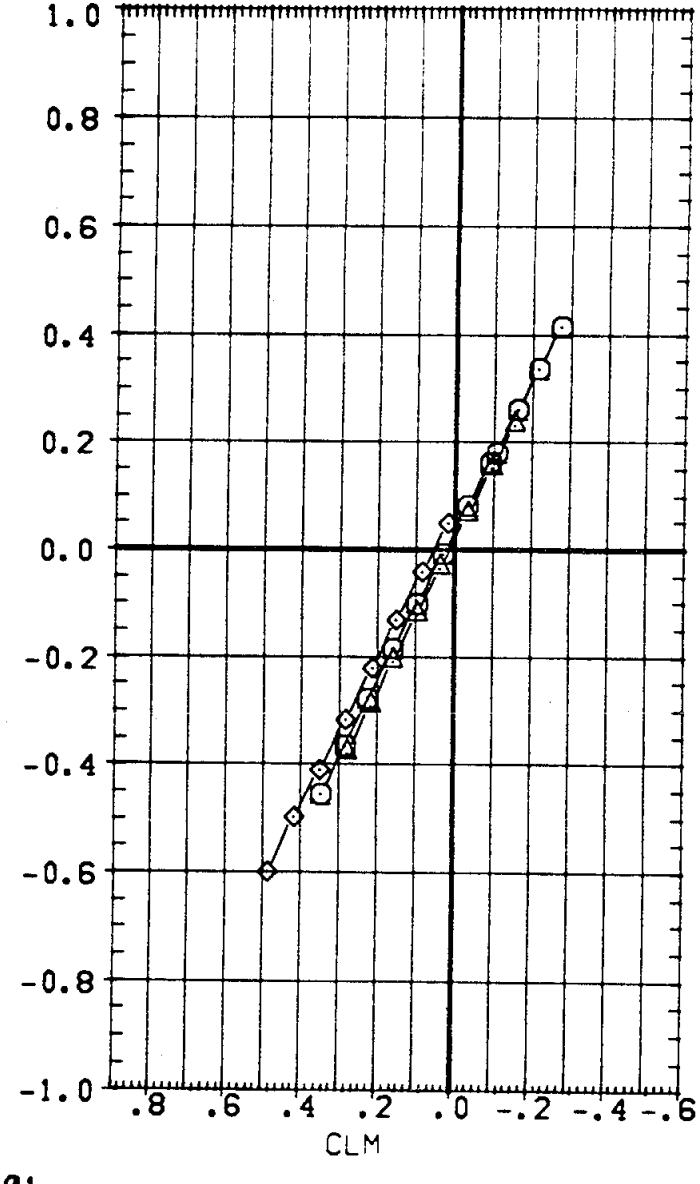
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(101)
(A72502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

RUDDER	AILRON	RUDFLR	ELEVTR
.000	.000	10.000	.000
.000	.000	10.000	10.000
.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







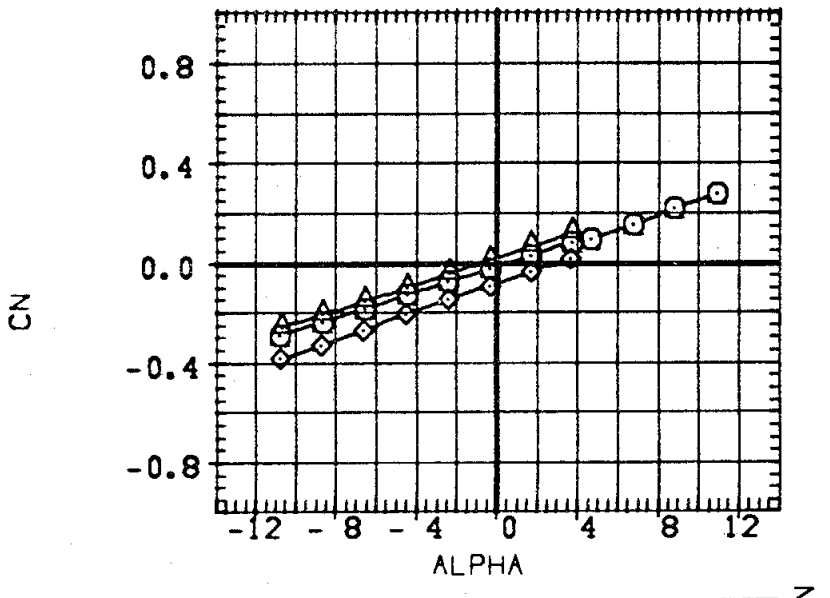
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

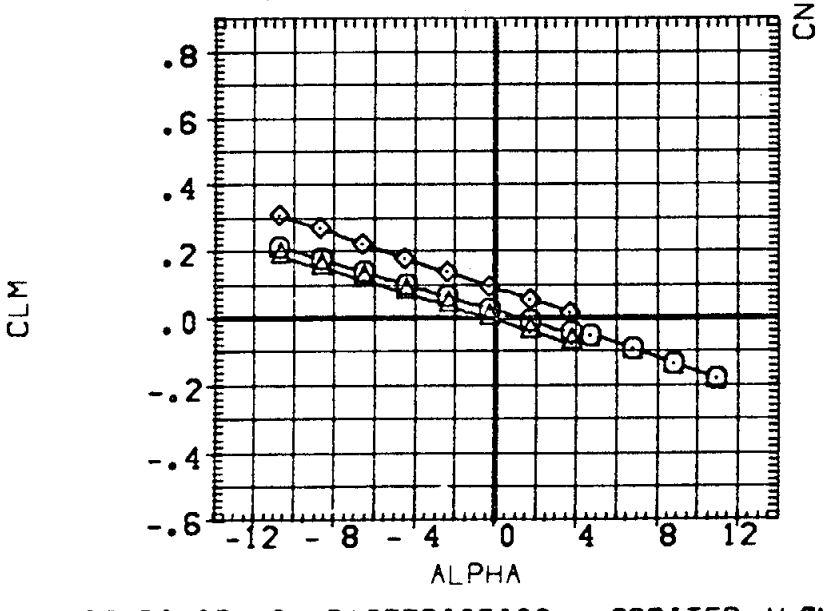
(O)MACH = 1.95

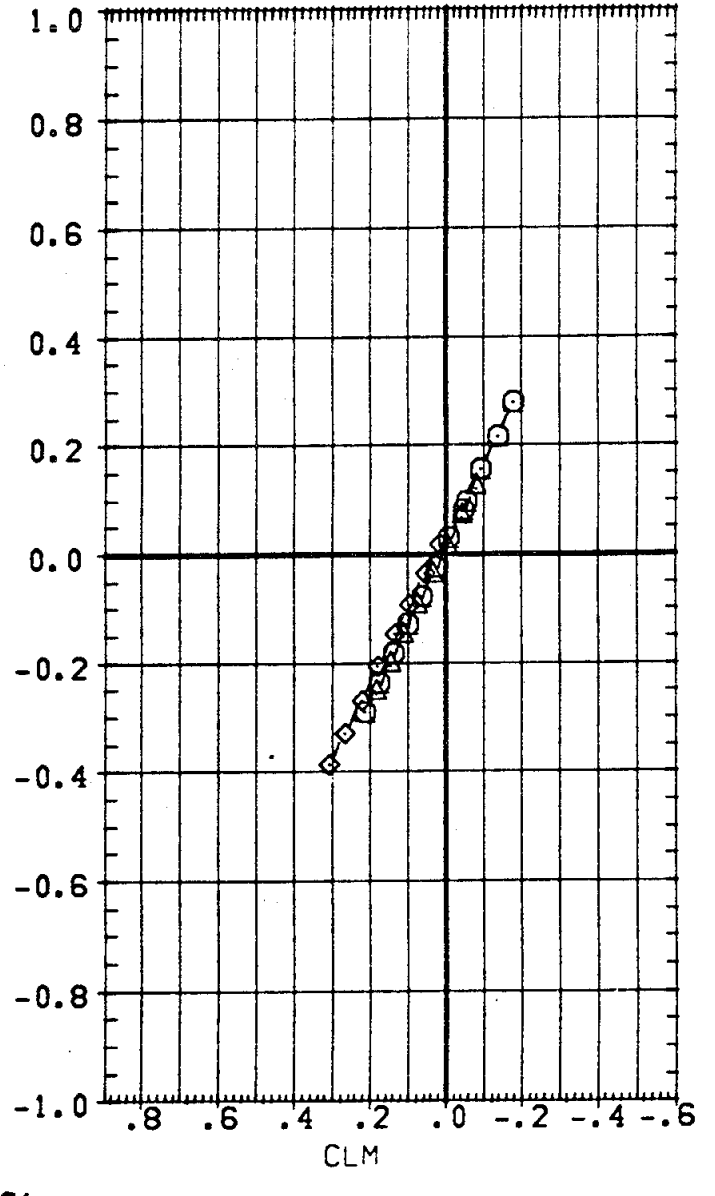
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(AP2502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(AP2503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

RUDDER	AILRON	RUDFLR	ELEVTR
.000	.000	10.000	.000
.000	.000	10.000	10.000
.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





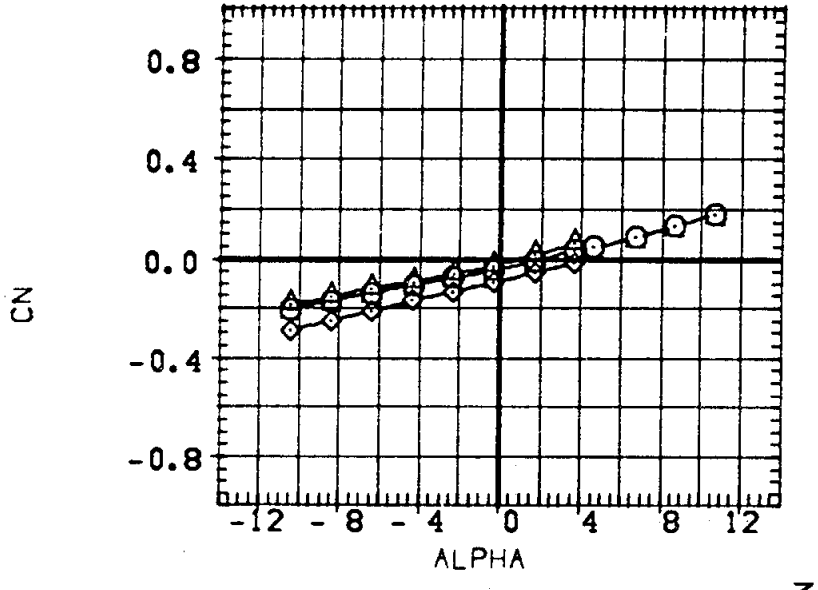


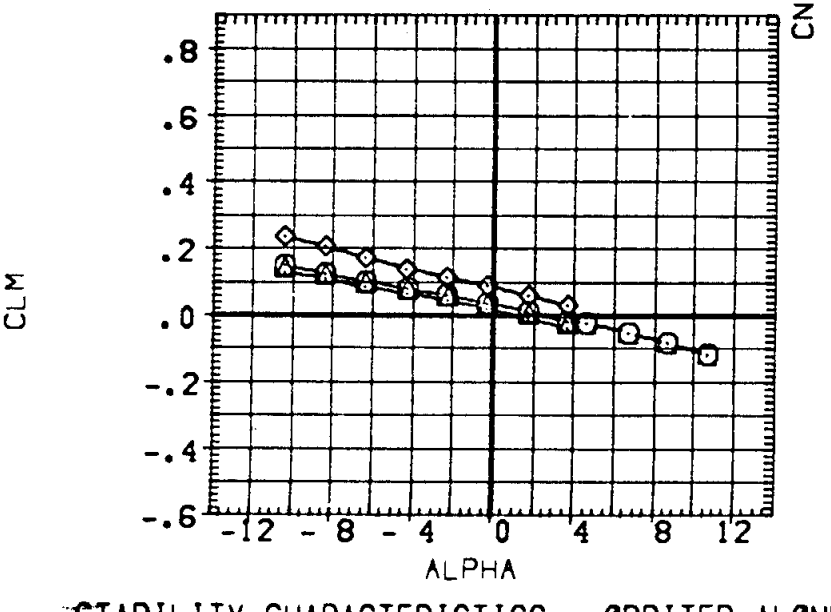
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

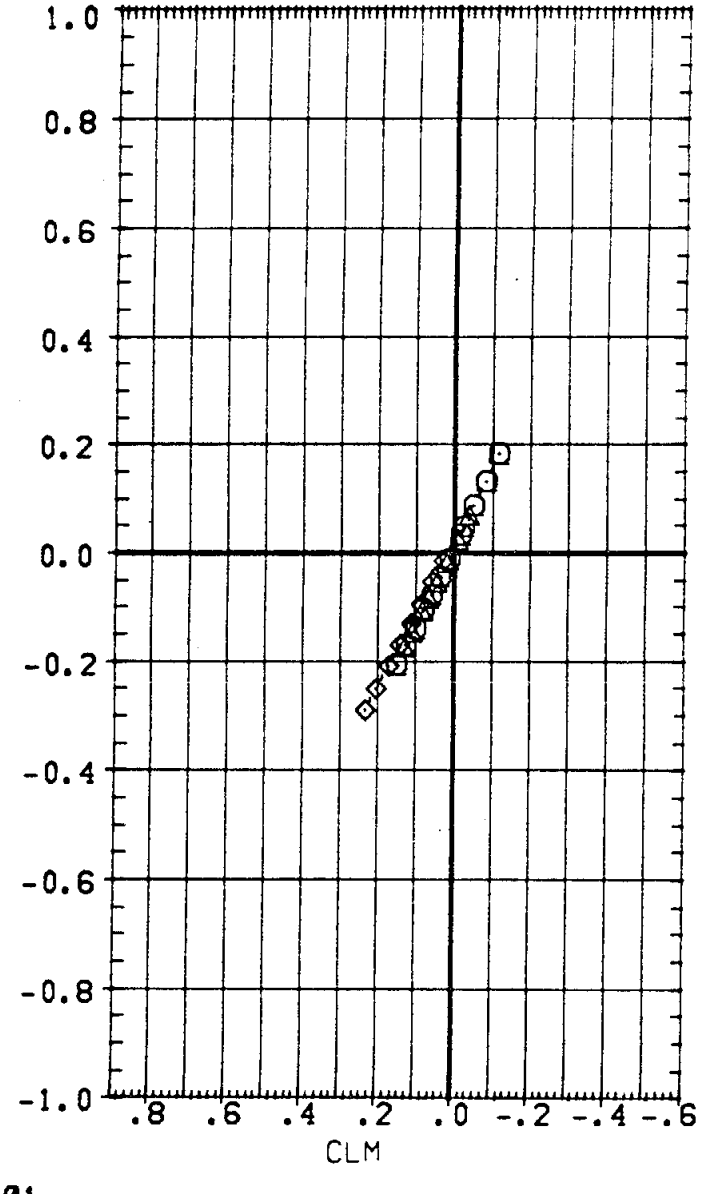
(E)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	AILRON	RUDFLR	ELEVTR
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	.000
(A72502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	10.000
(A72503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





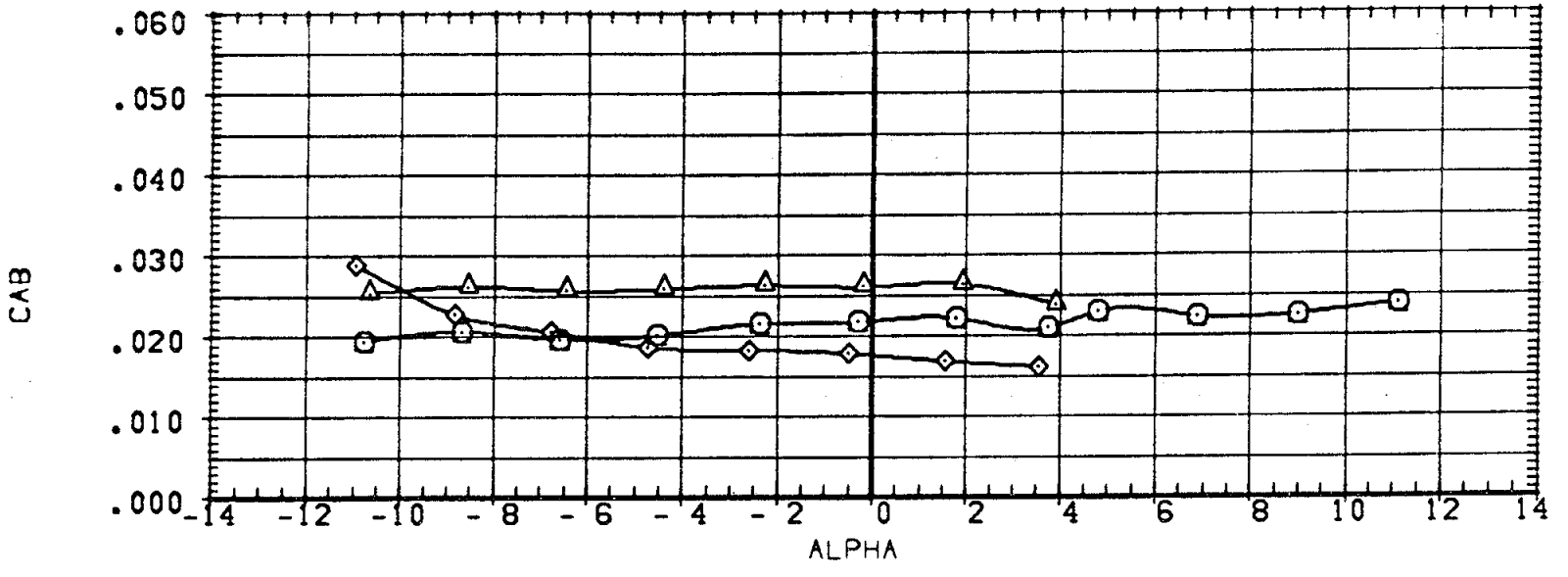


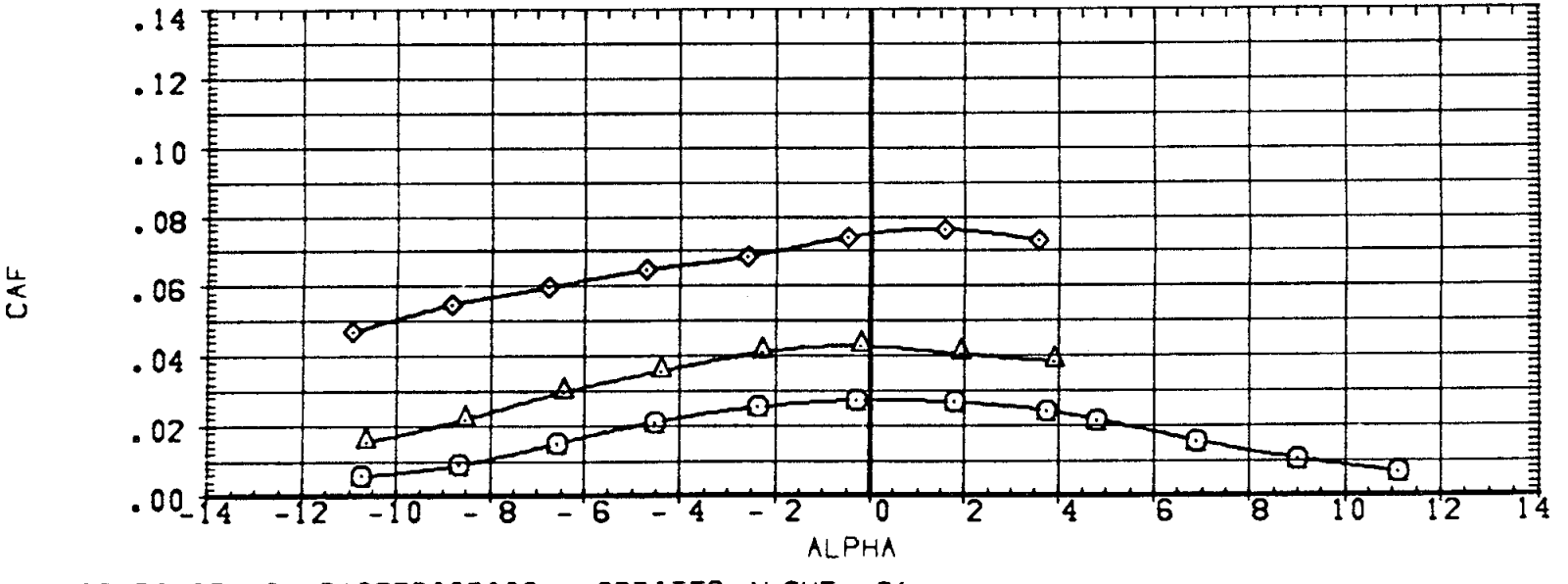
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	AILRON	RUDFLR	ELEVTR
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	.000
(A72502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	10.000
(A72503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



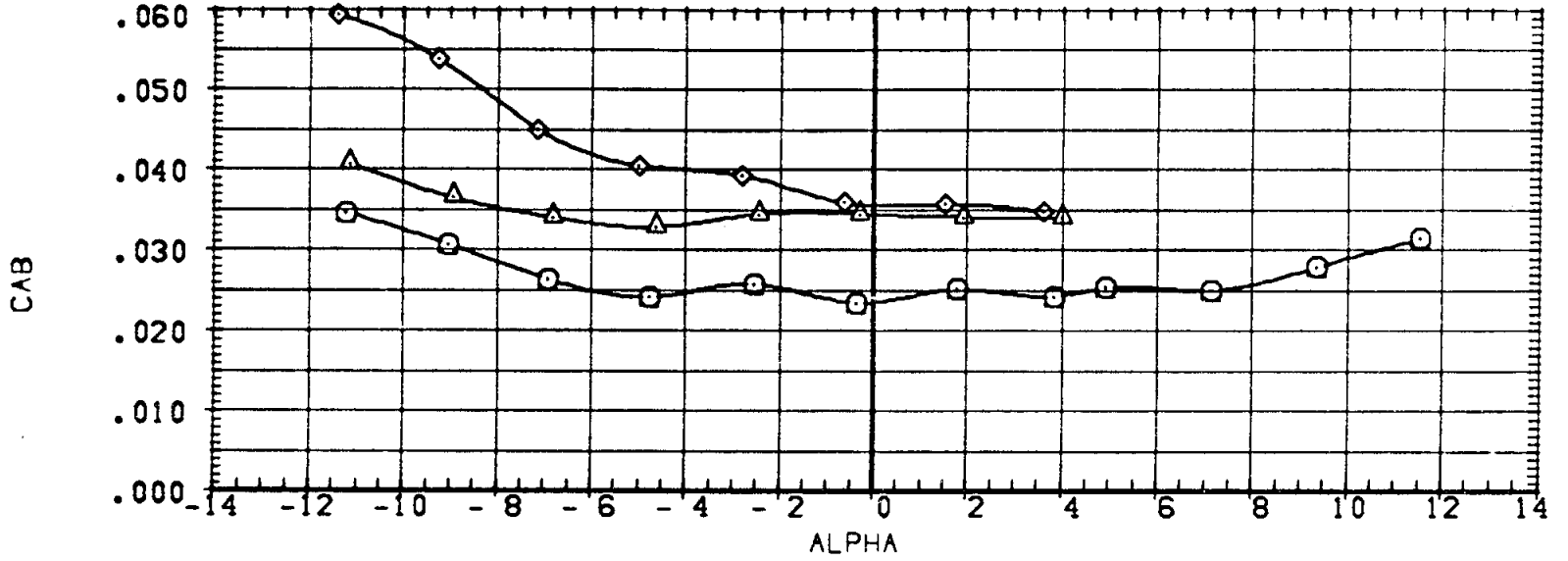


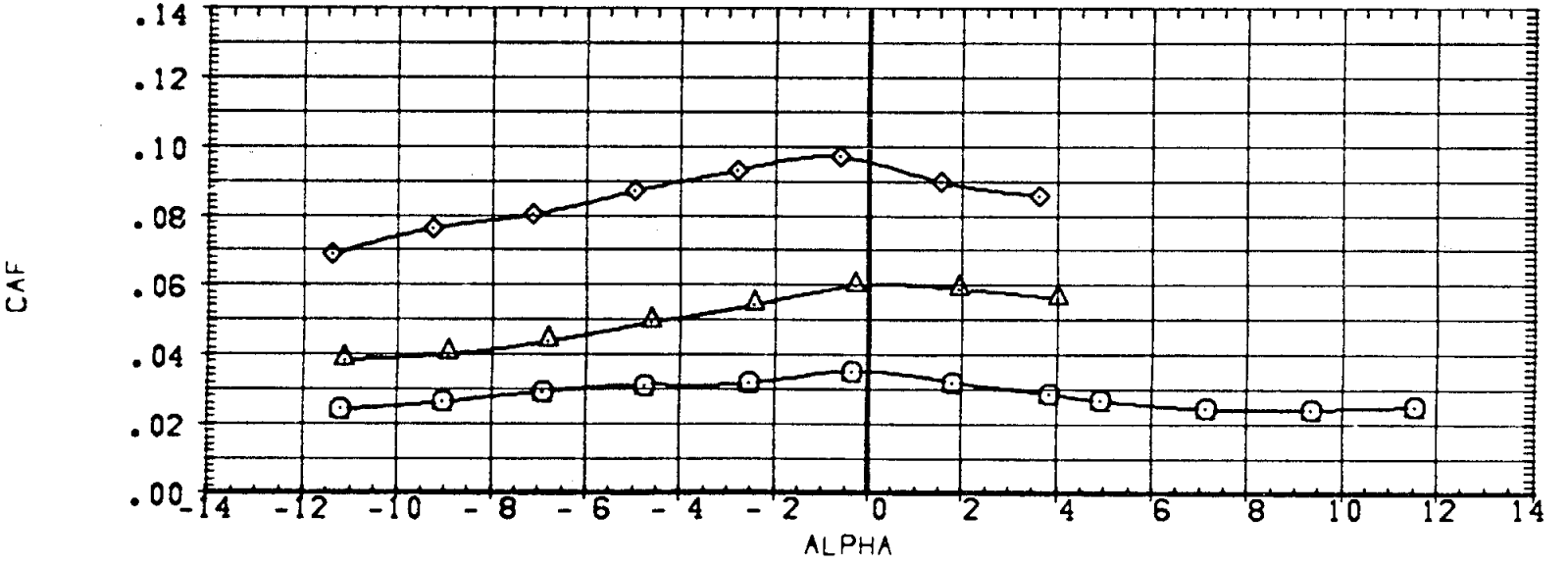
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(A)MACH = .60

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	RUDDER	AILRON	RUDFLR	ELEVTR
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	.000
(A72502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	10.000
(A72503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



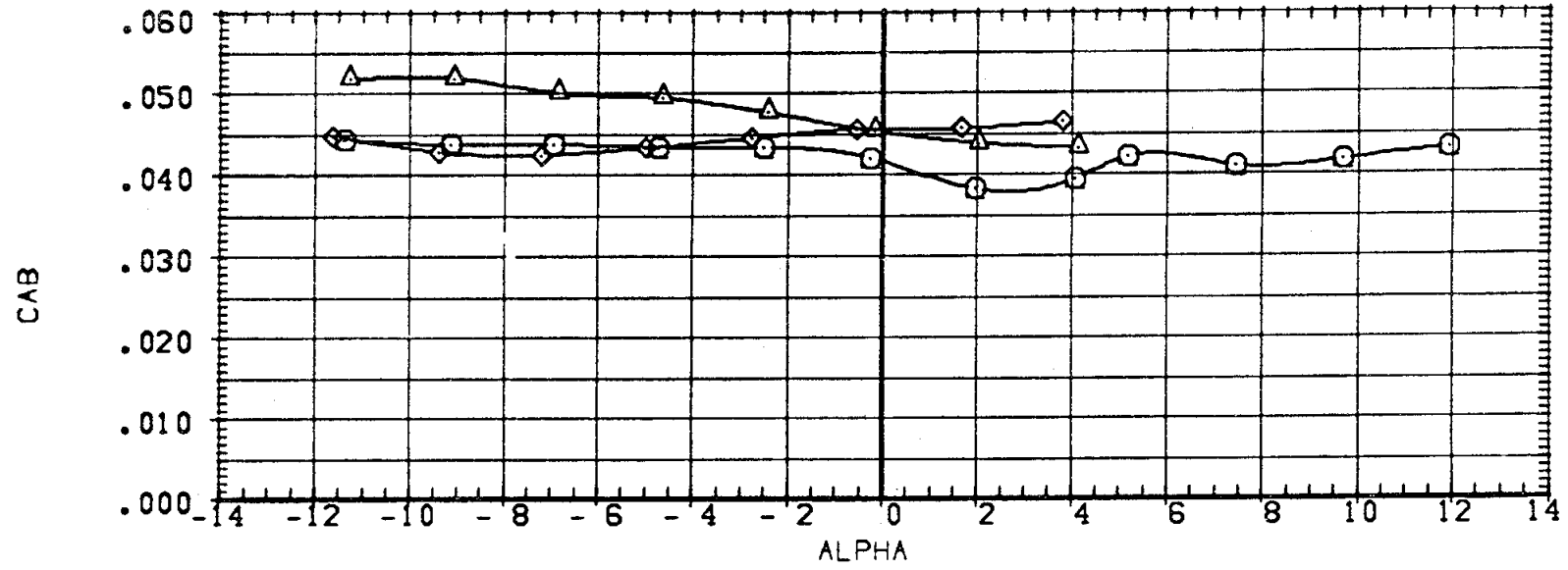


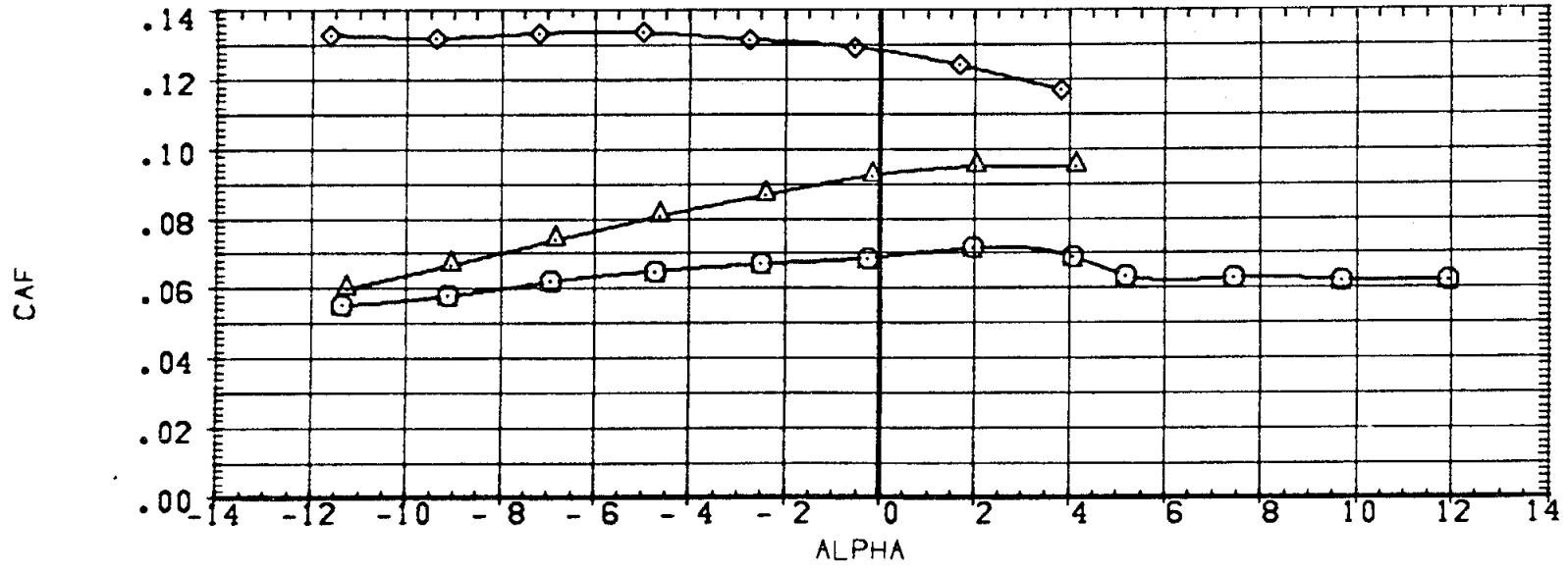
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	AILRON	RUDFLR	ELEVTR
(AY2501)	○	HSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	.000
(AY2502)	☆	HSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	10.000
(AY2503)	◇	HSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





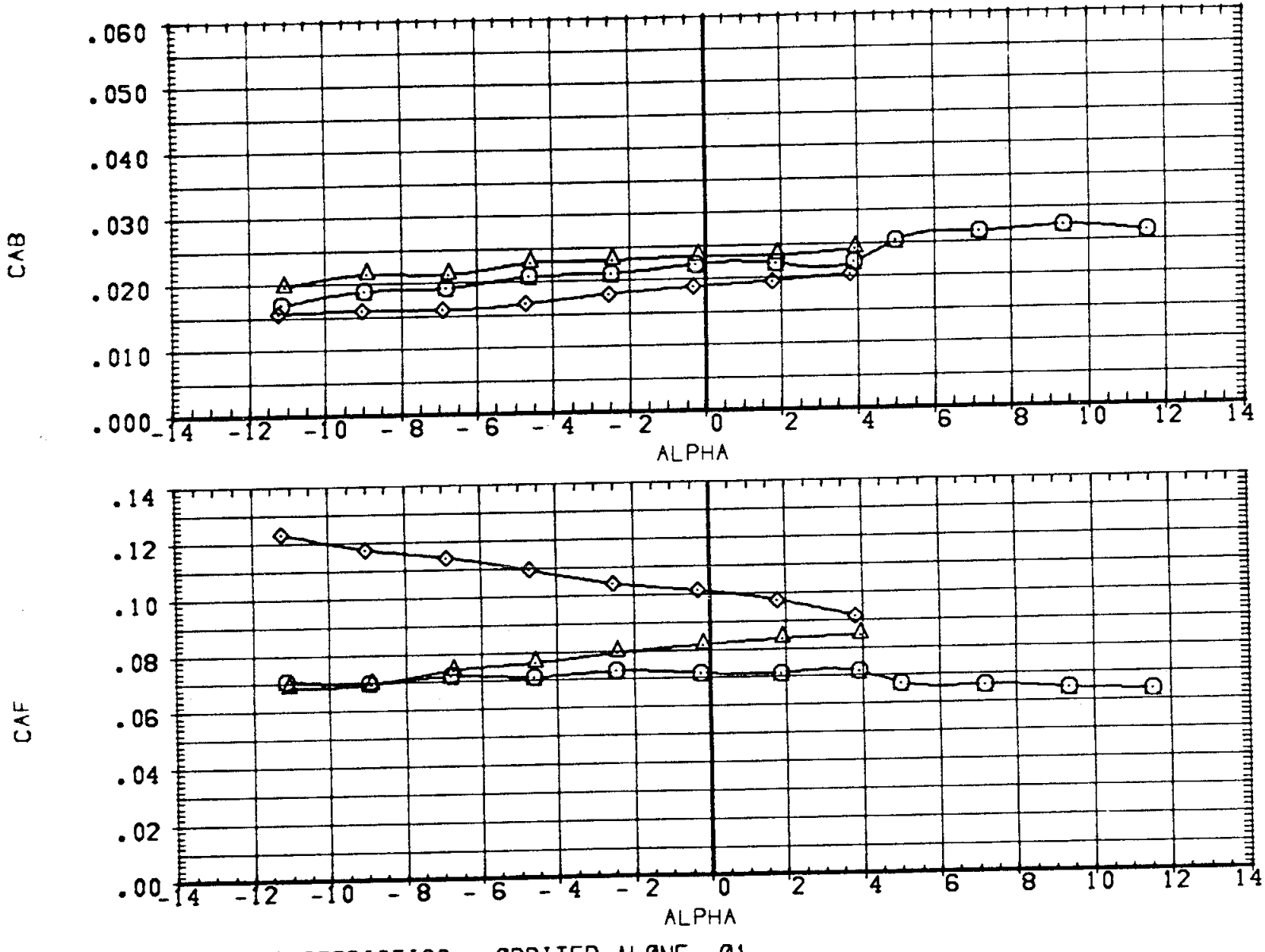
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(C)MACH = 1.19

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

RUDDER	AILRON	RUDFLR	ELEVTR
.000	.000	10.000	.000
.000	.000	10.000	10.000
.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

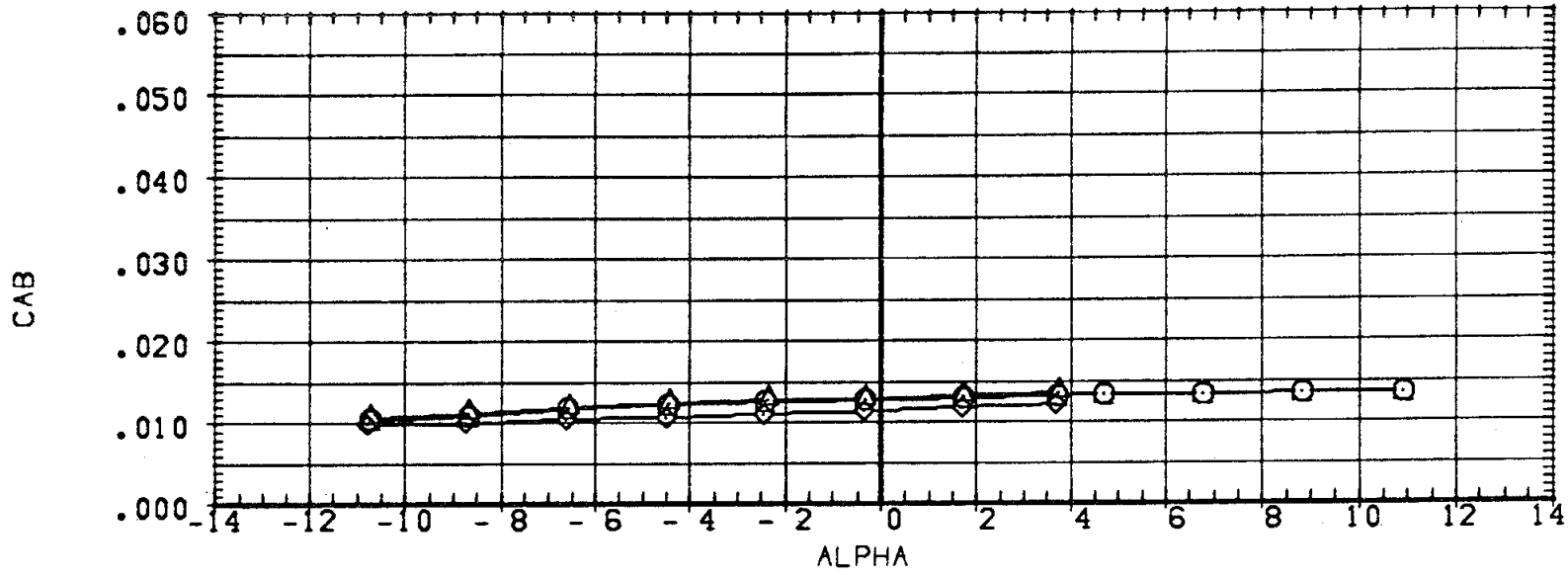


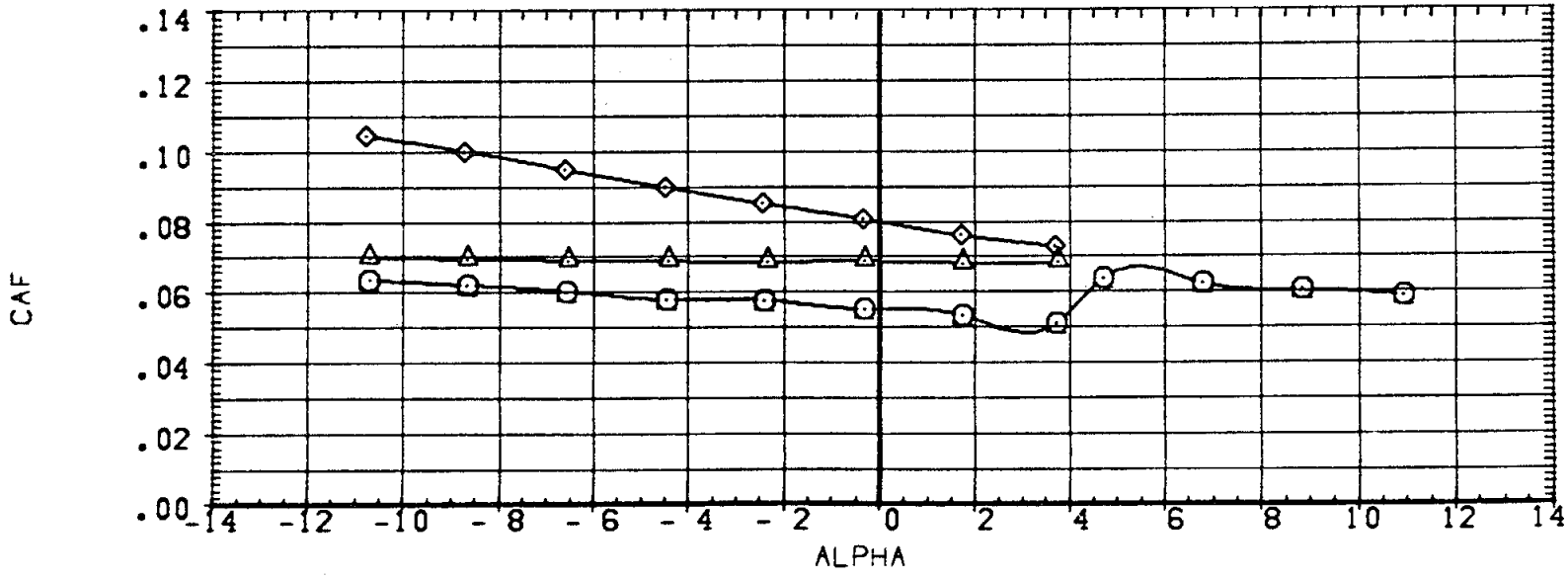
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(D)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	AILRON	RUDFLR	ELEVTR
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	.000
(A72502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	10.000
(A72503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



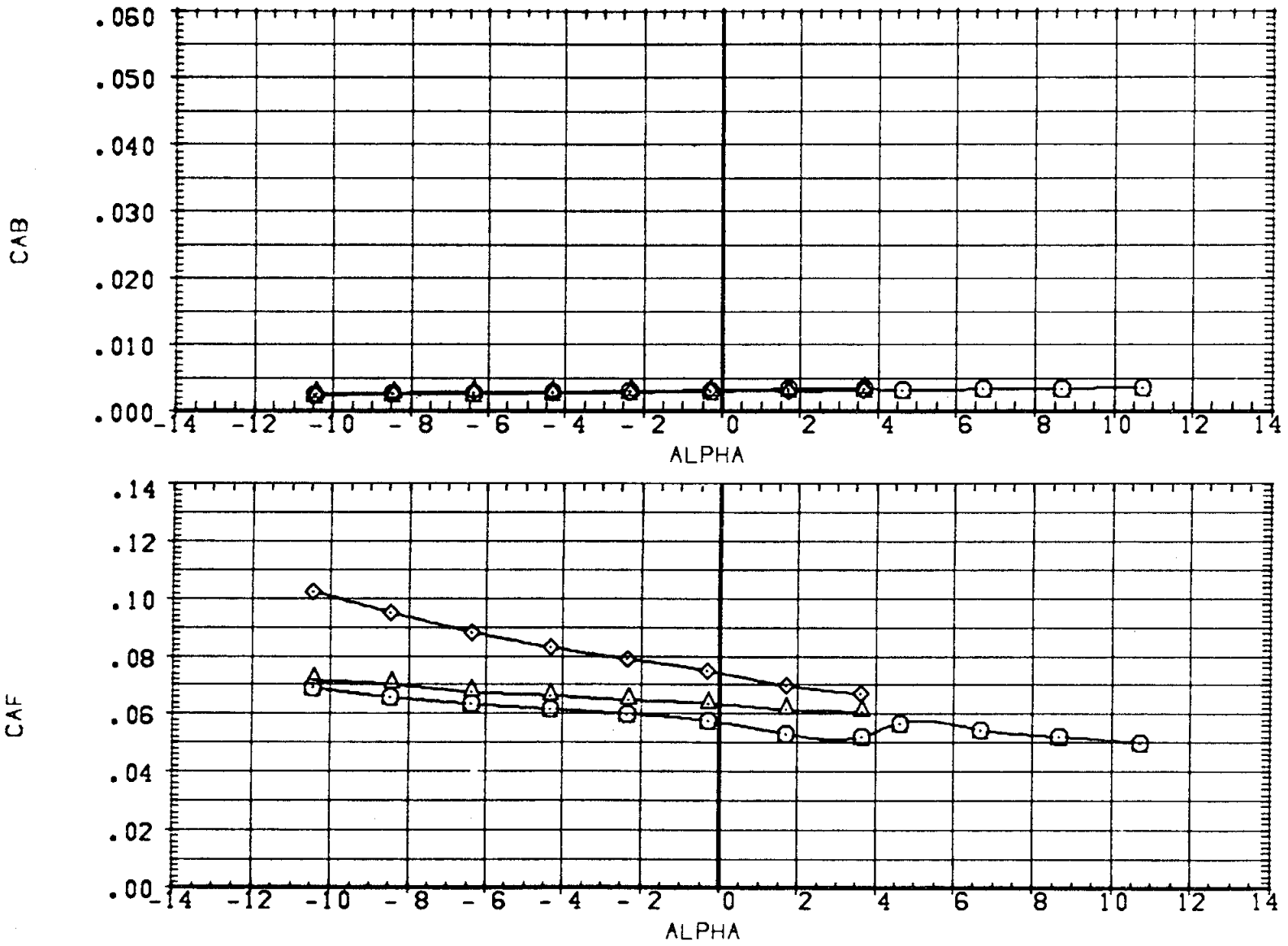


STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(E)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	AILRON	RUDFLR	ELEVTR
(AT2S01) ○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	.000
(AT2S02) ⊠	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	10.000
(AT2S03) ◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

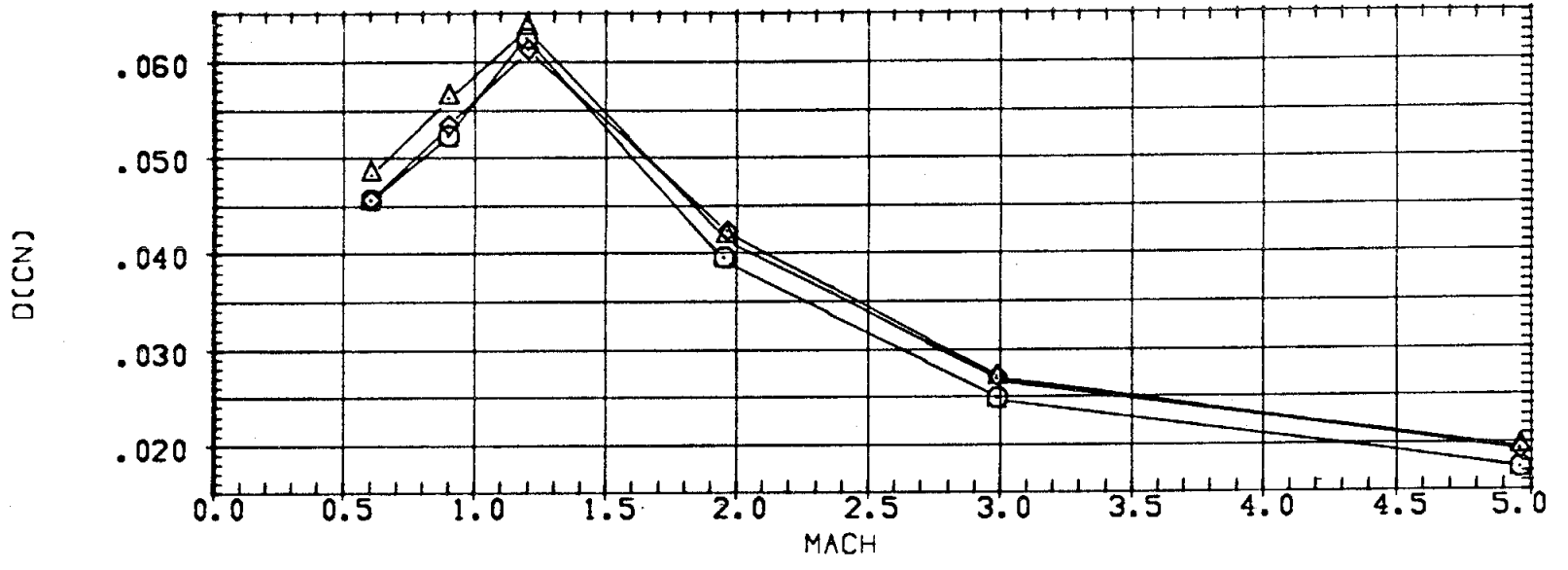


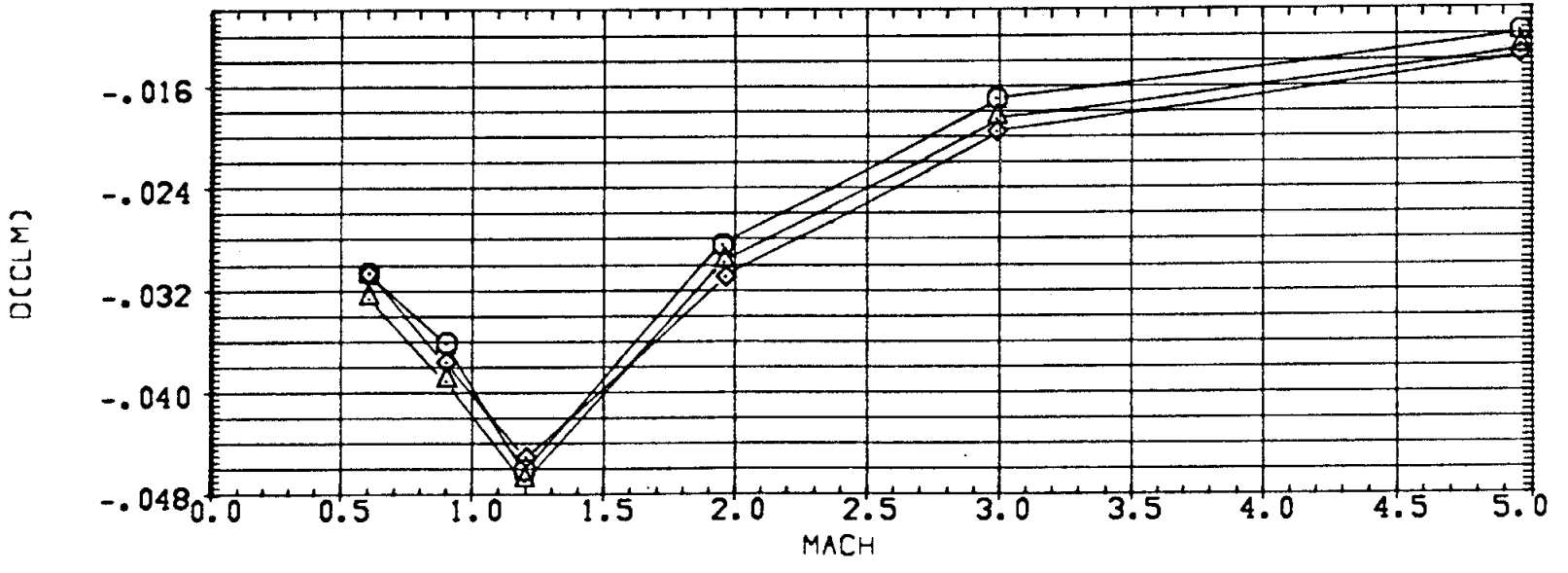
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(F)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	AILRON	RUDFLR	ELEVTR
(872501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	.000
(872502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	10.000
(872503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



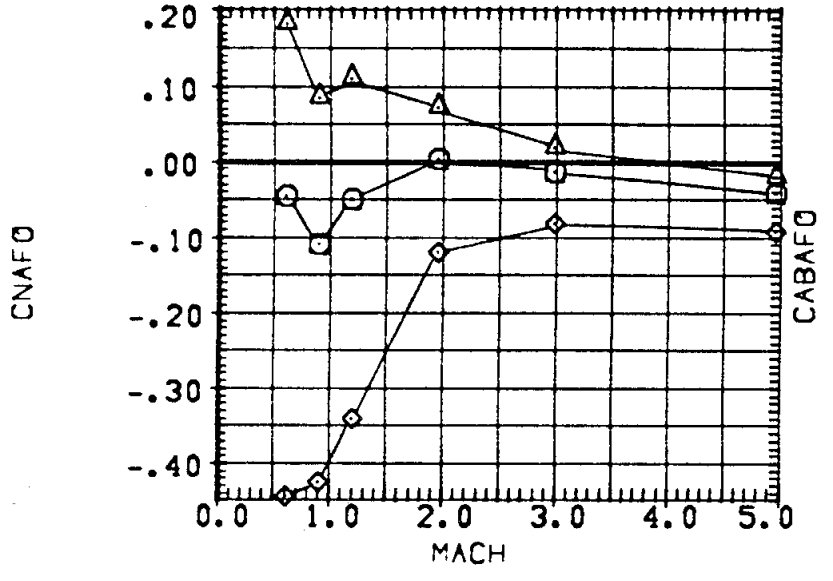


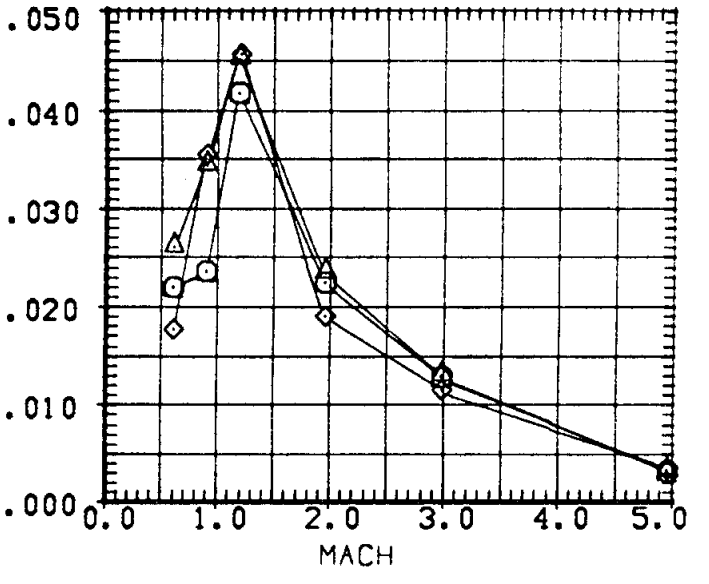
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

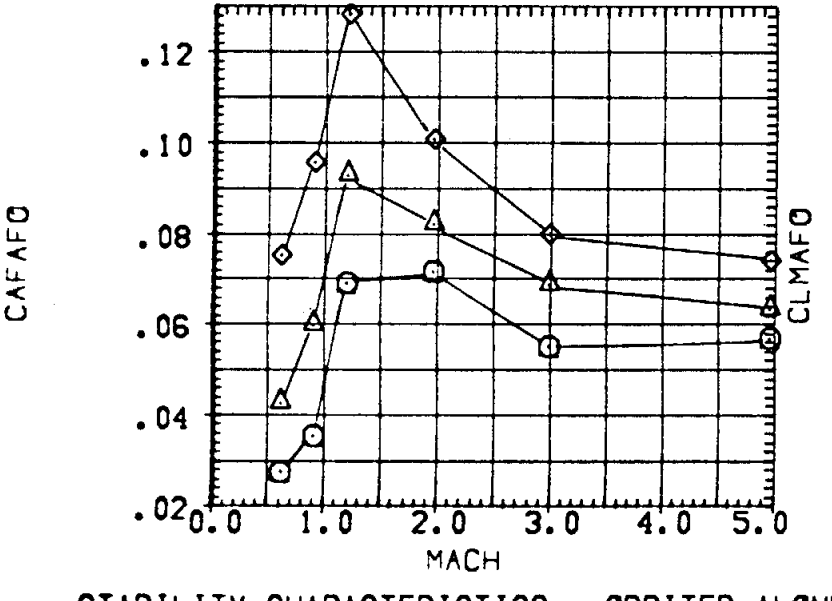
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(872501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(872502)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(872503)	◇	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

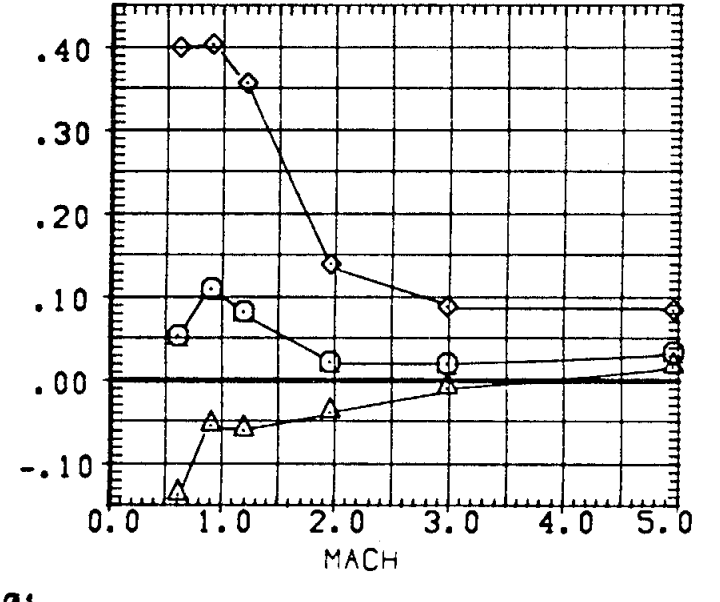
RUDDER	AILRON	RUDFLR	ELEVTR
.000	.000	10.000	.000
.000	.000	10.000	10.000
.000	.000	10.000	-20.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







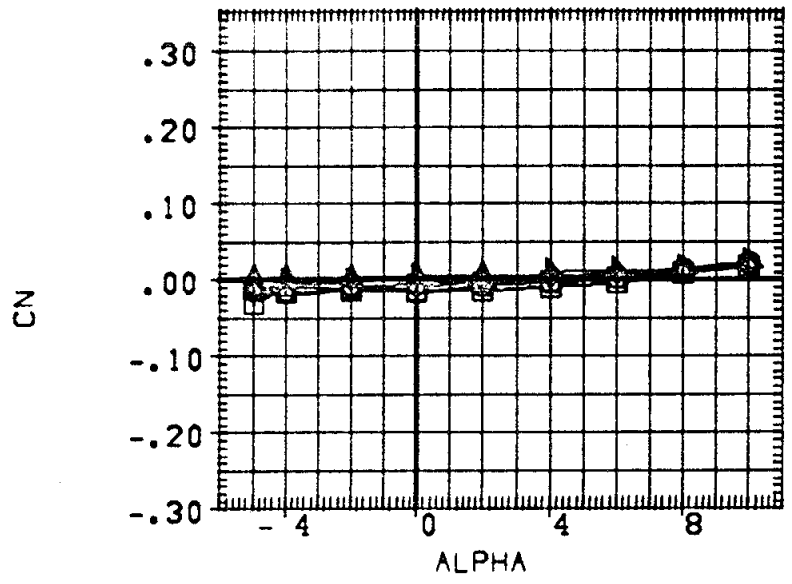


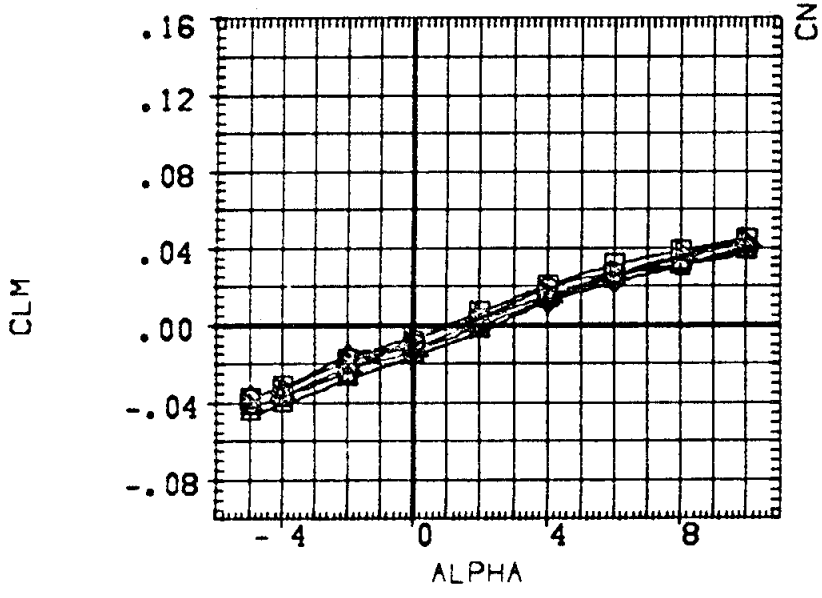
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

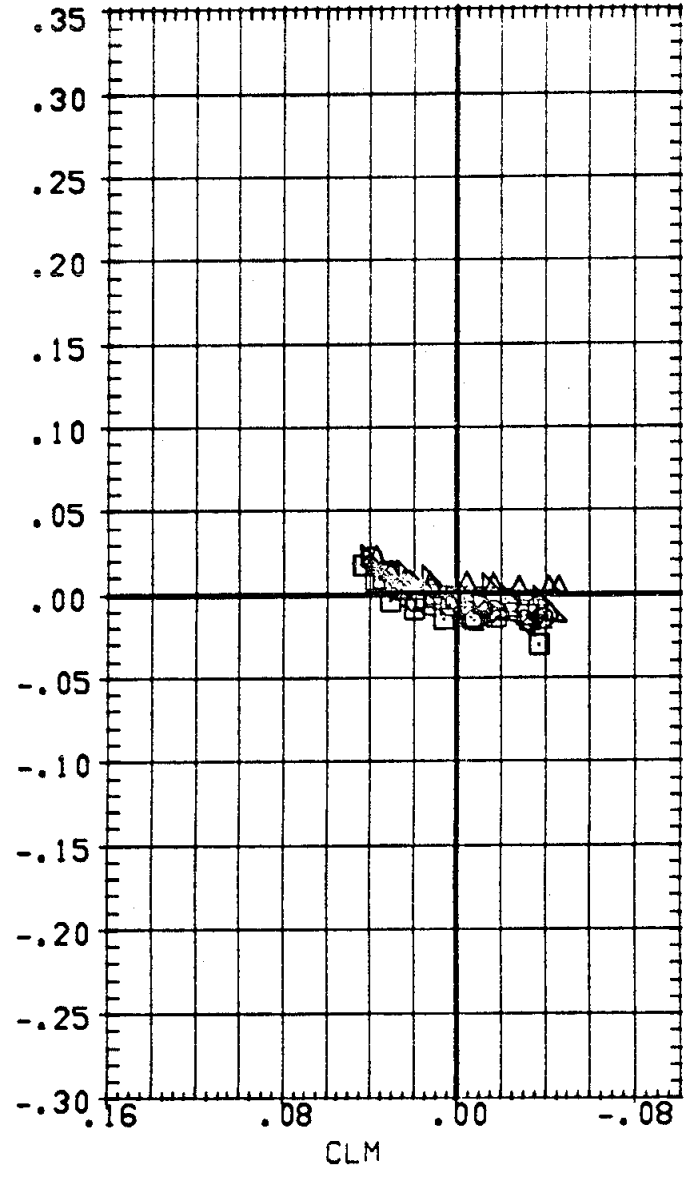
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72102)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72103)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72104)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72105)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72106)	◁	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







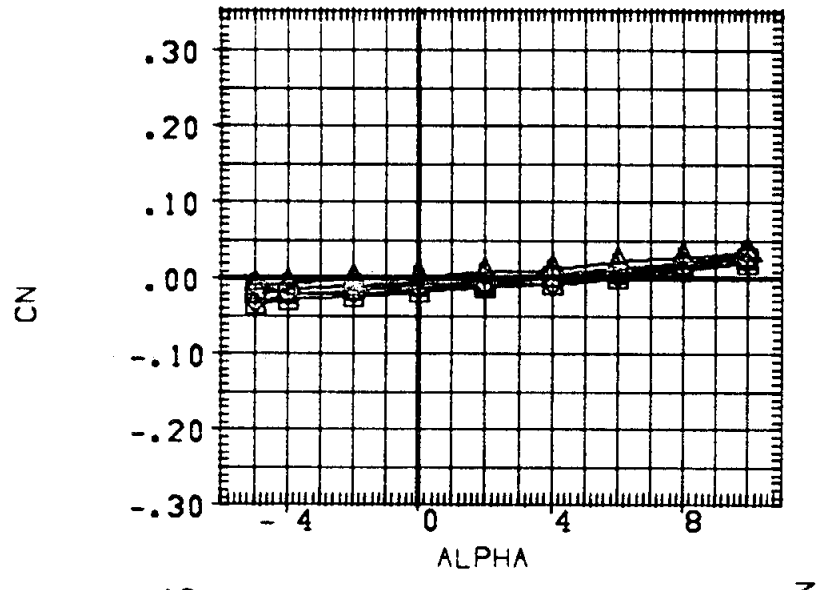
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

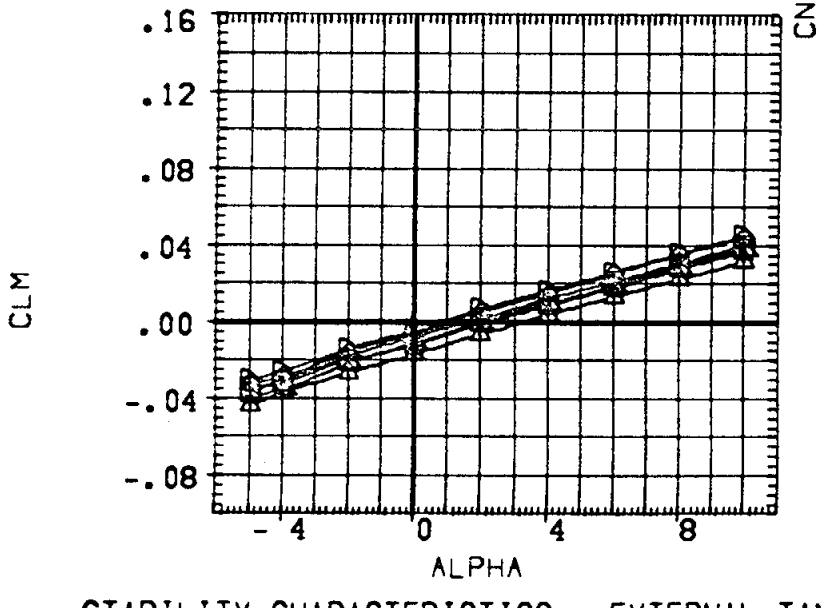
(A)MACH = .60

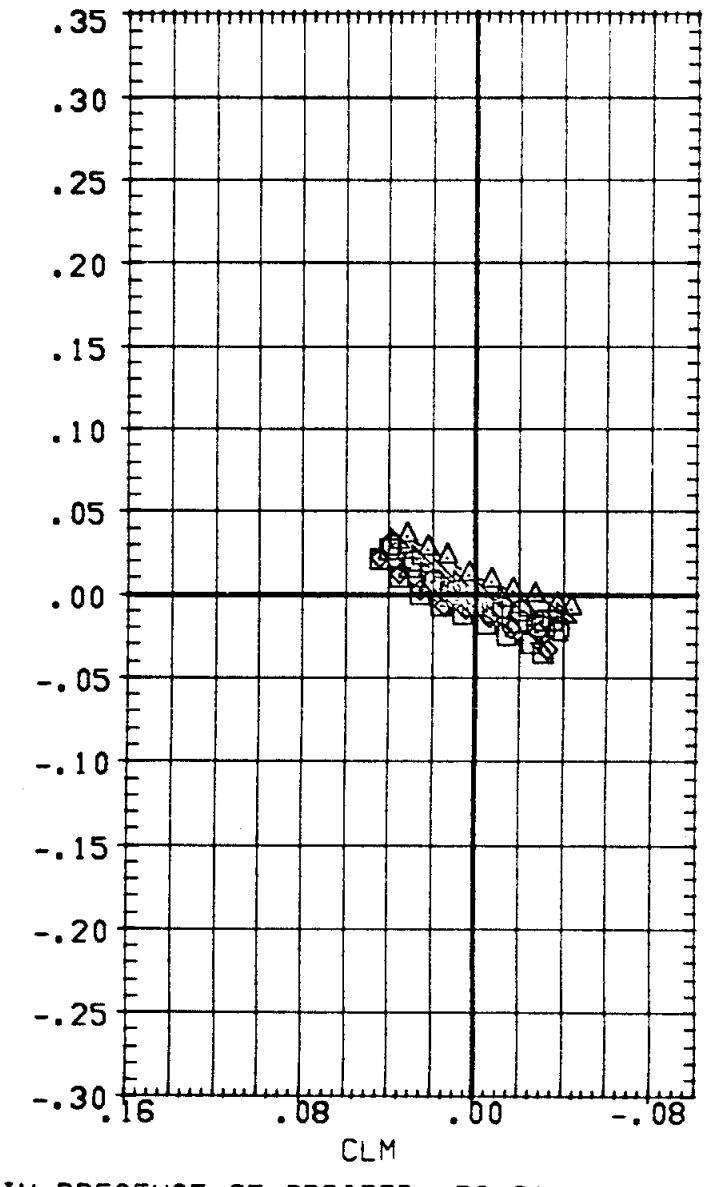
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72103)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72104)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72105)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72106)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





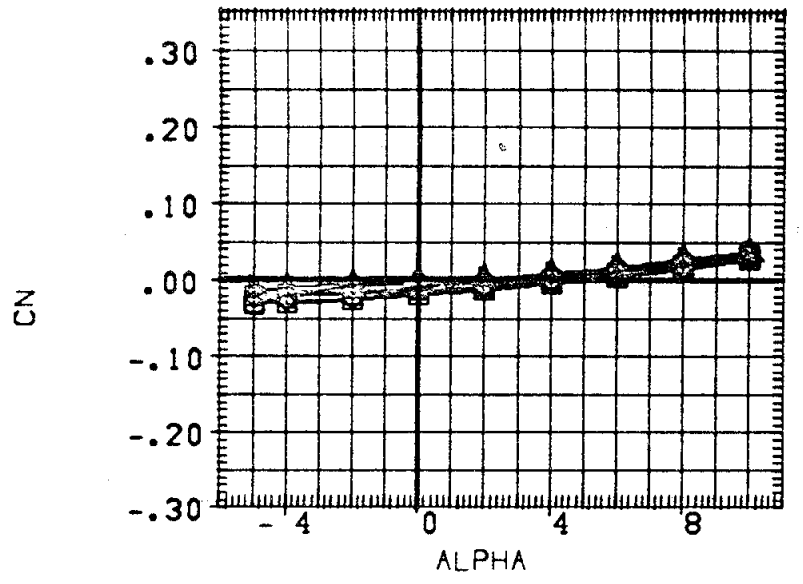


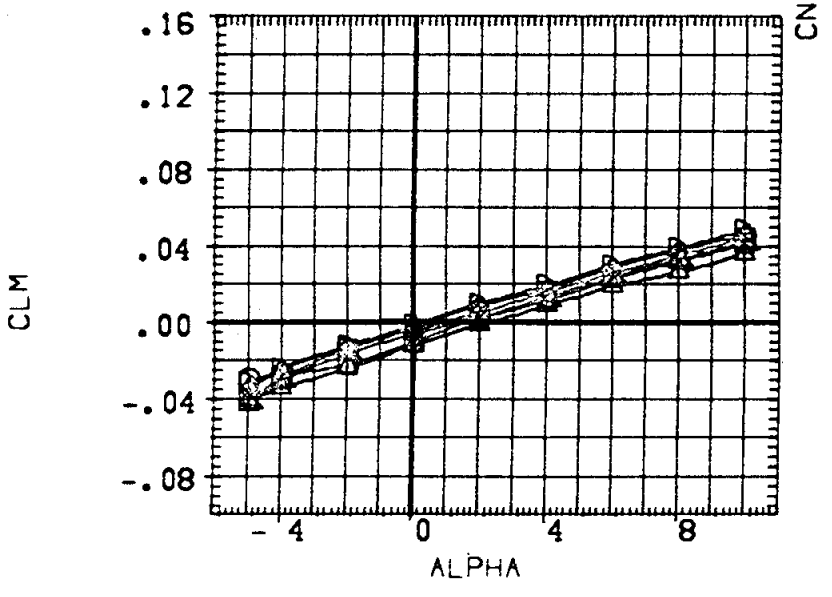
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

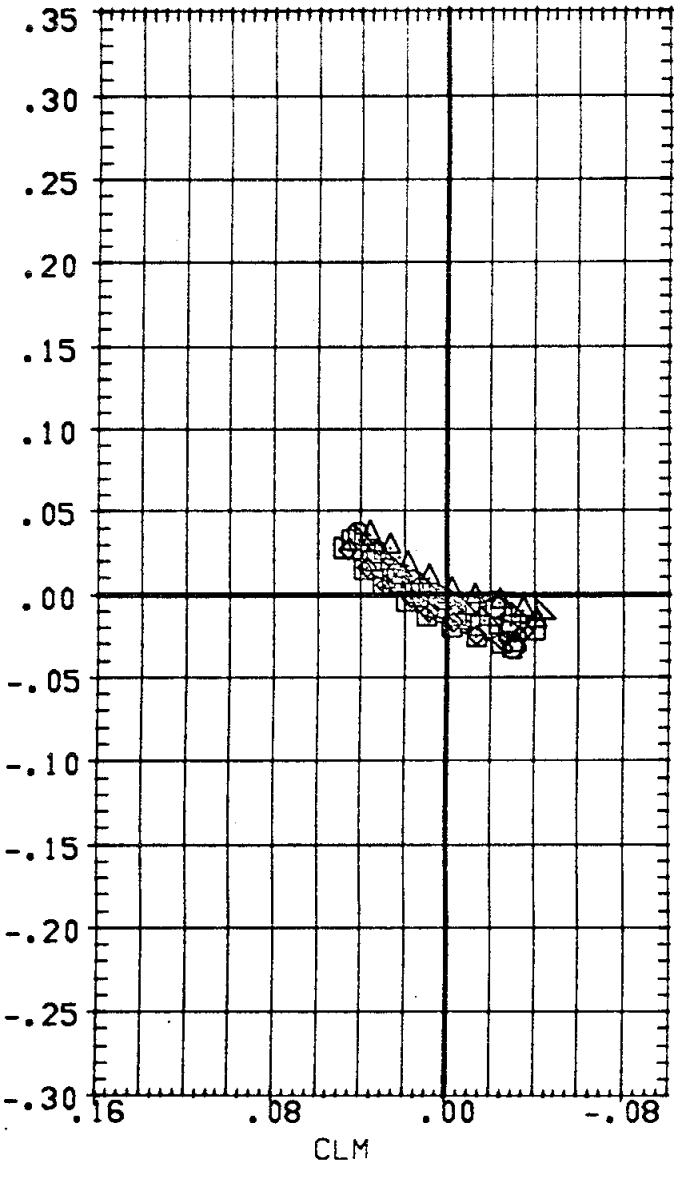
(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.120	10.000	
(A72102)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.120	10.000	
(A72103)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.120	10.000	
(A72104)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.240	10.000	
(A72105)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.240	10.000	
(A72106)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





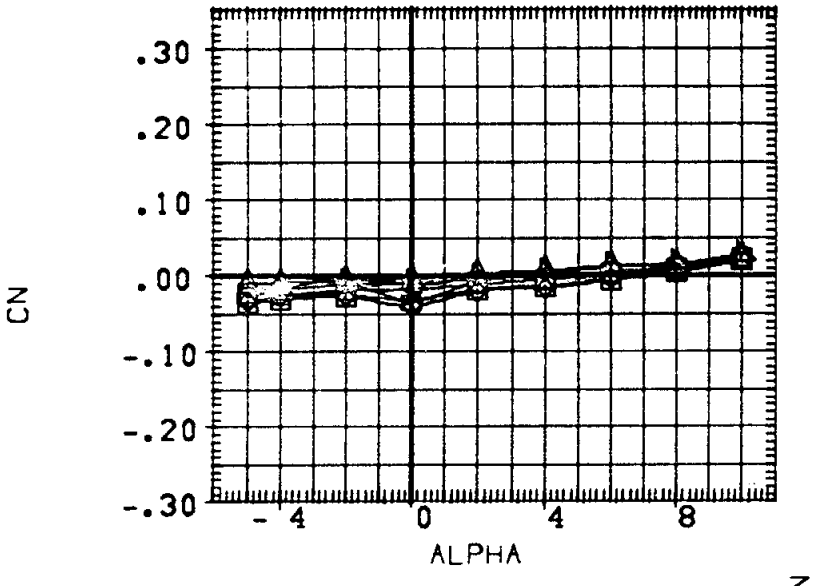


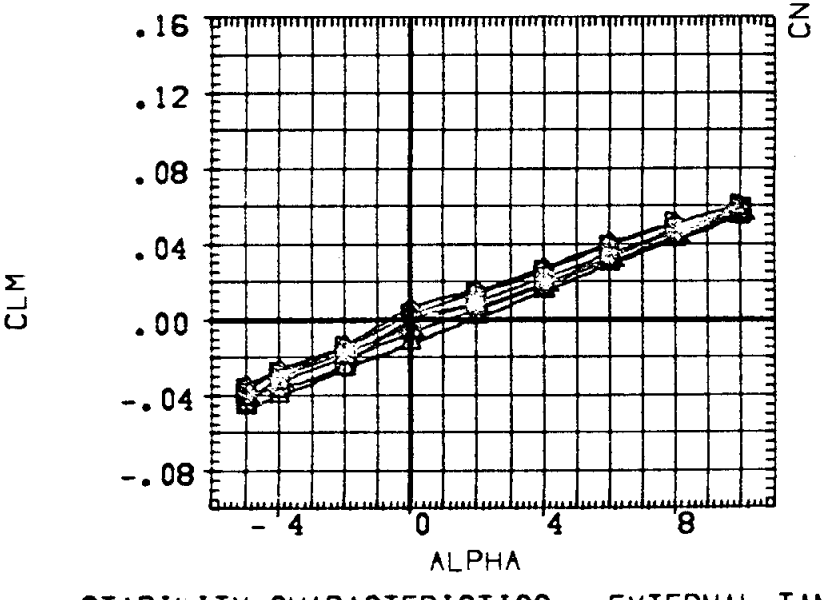
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

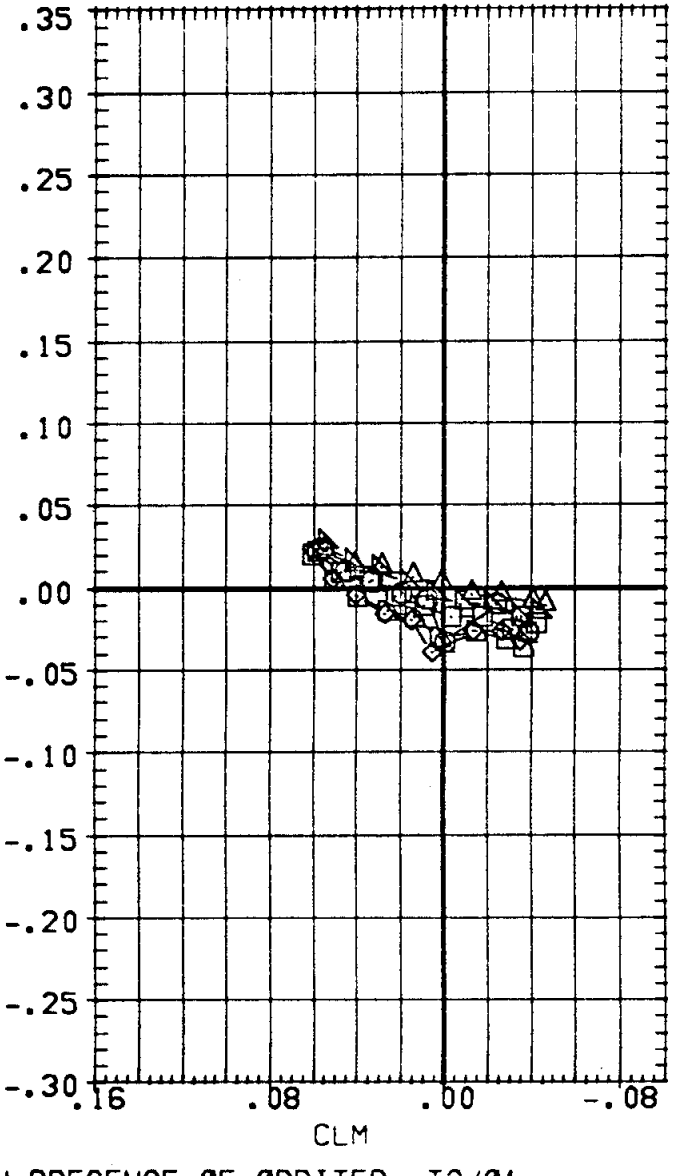
(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.120	10.000	
(A72102)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.120	10.000	
(A72103)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.120	10.000	
(A72104)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.240	10.000	
(A72105)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.240	10.000	
(A72106)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







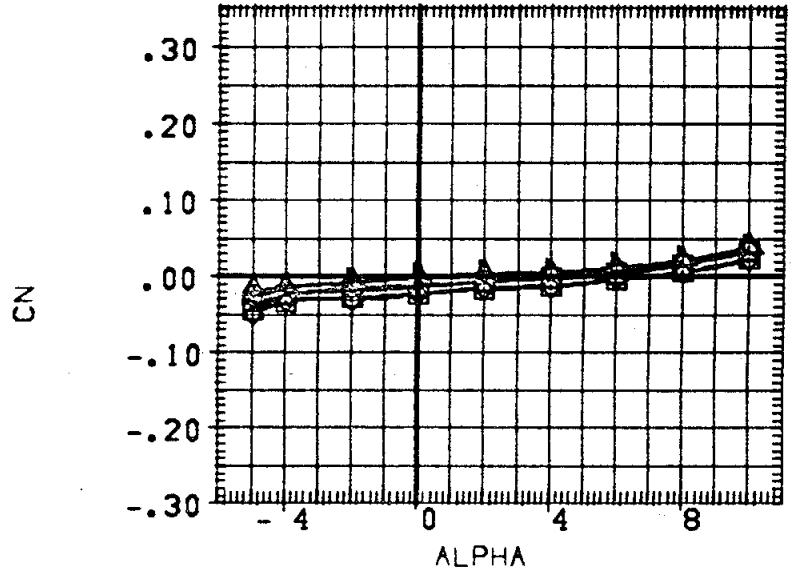
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

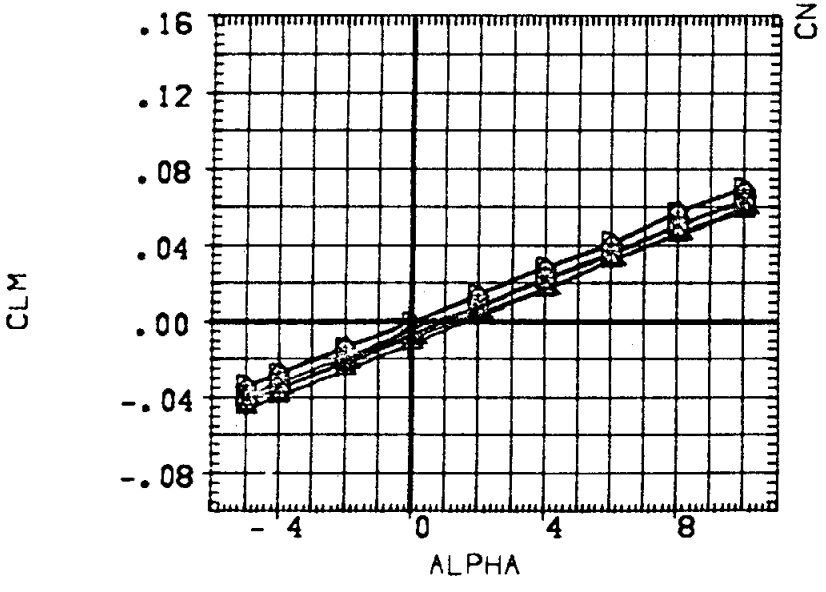
(D)MACH = 1.21

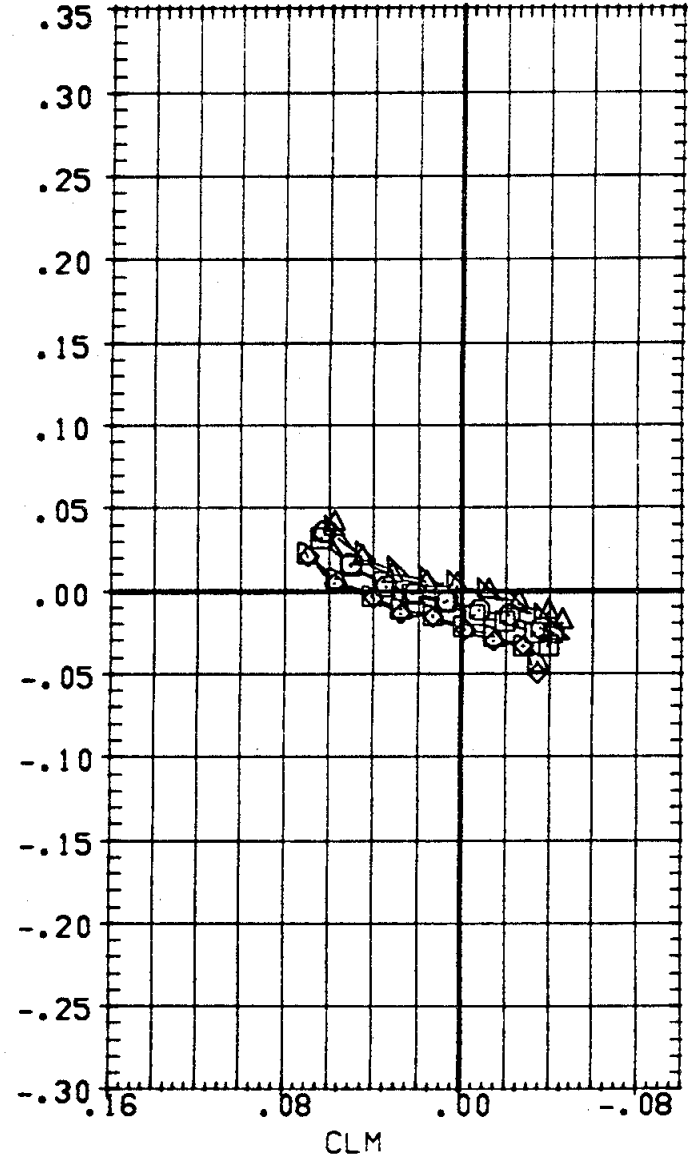
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72102)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72103)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72104)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72105)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72106)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





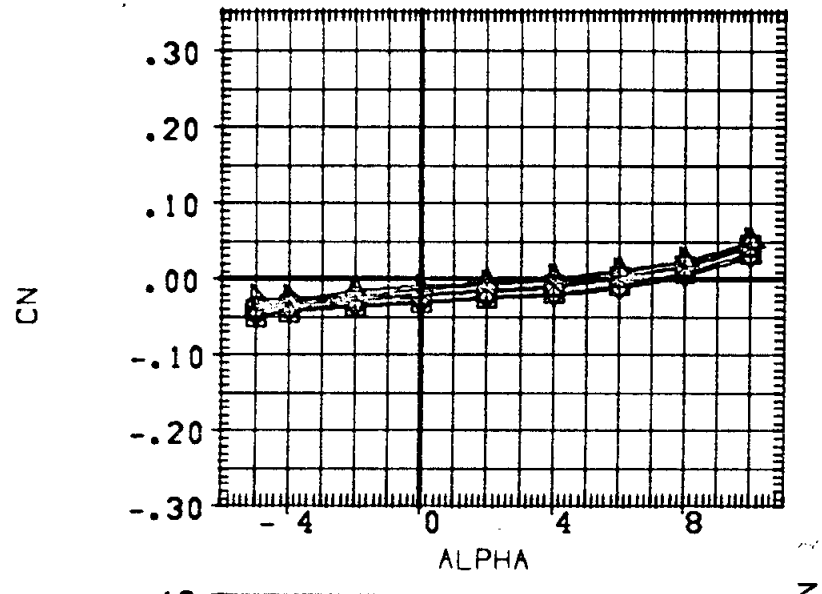


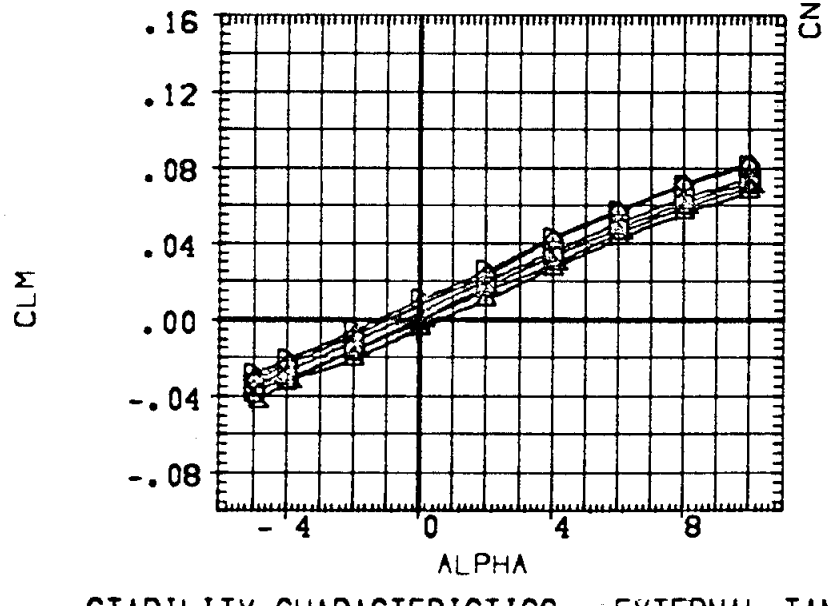
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

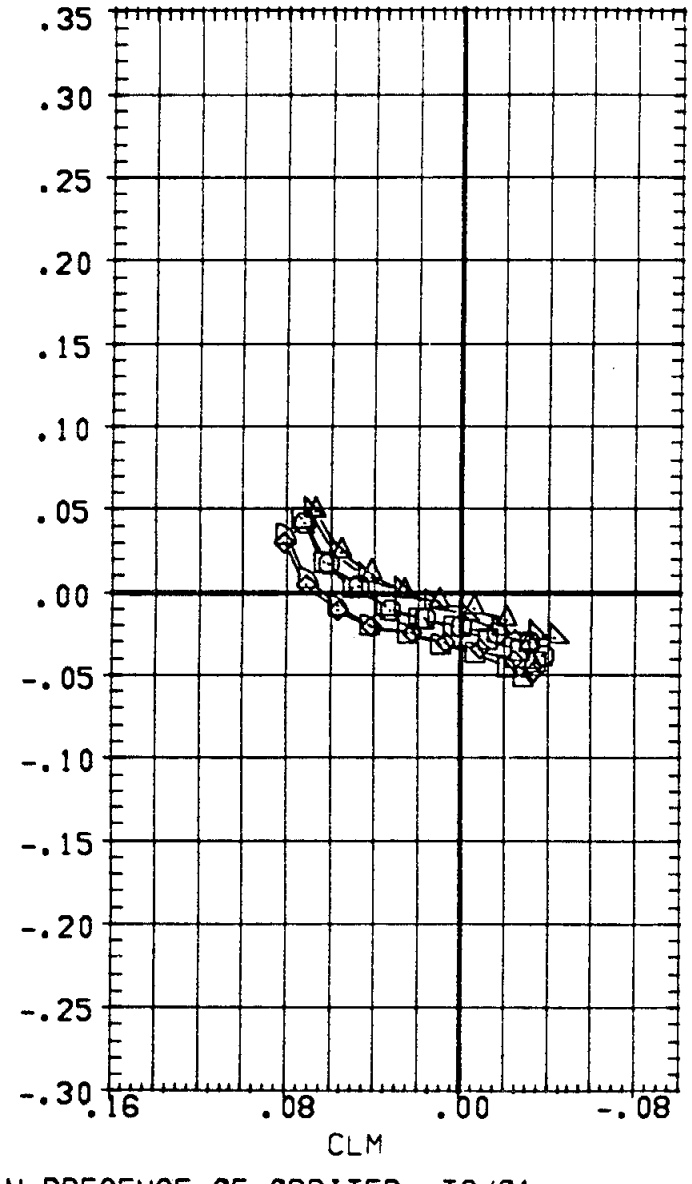
(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.120	10.000	
(A72102)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.120	10.000	
(A72103)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.120	10.000	
(A72104)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.240	10.000	
(A72105)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.240	10.000	
(A72106)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







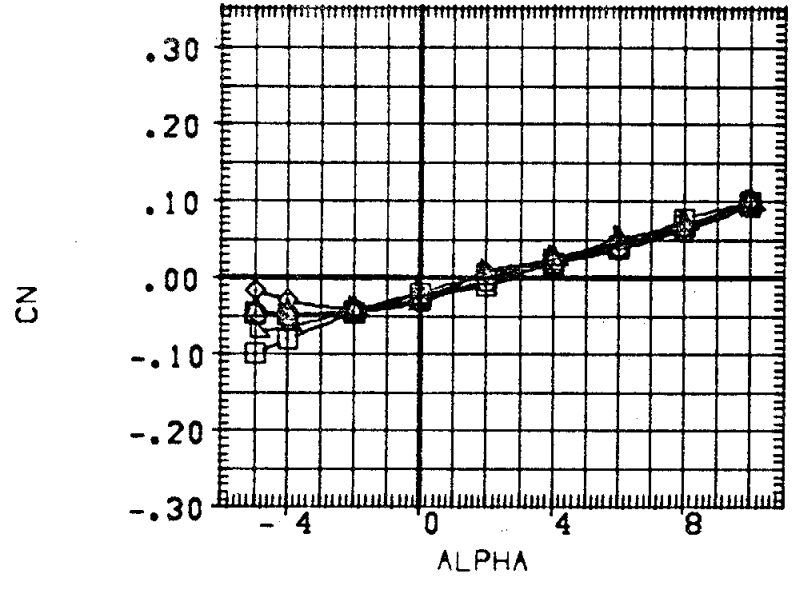
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

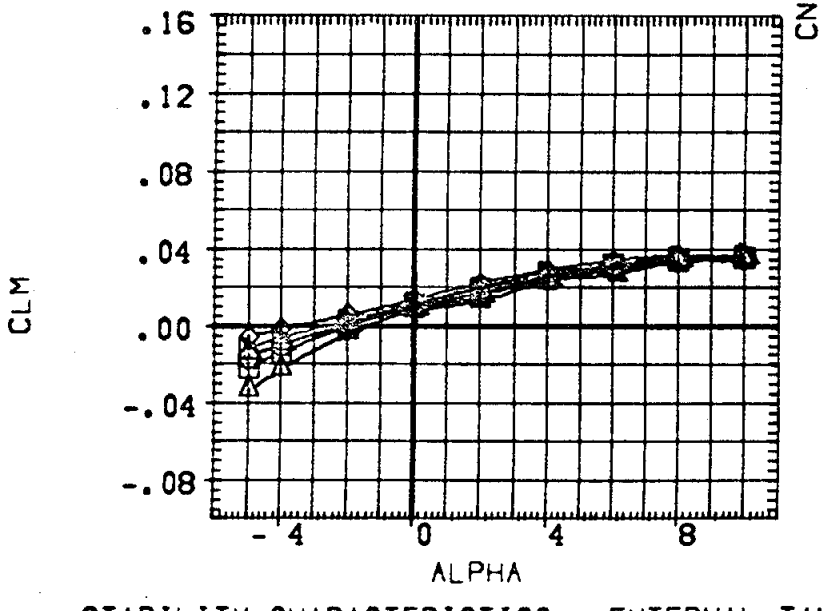
(F)MACH = 1.95

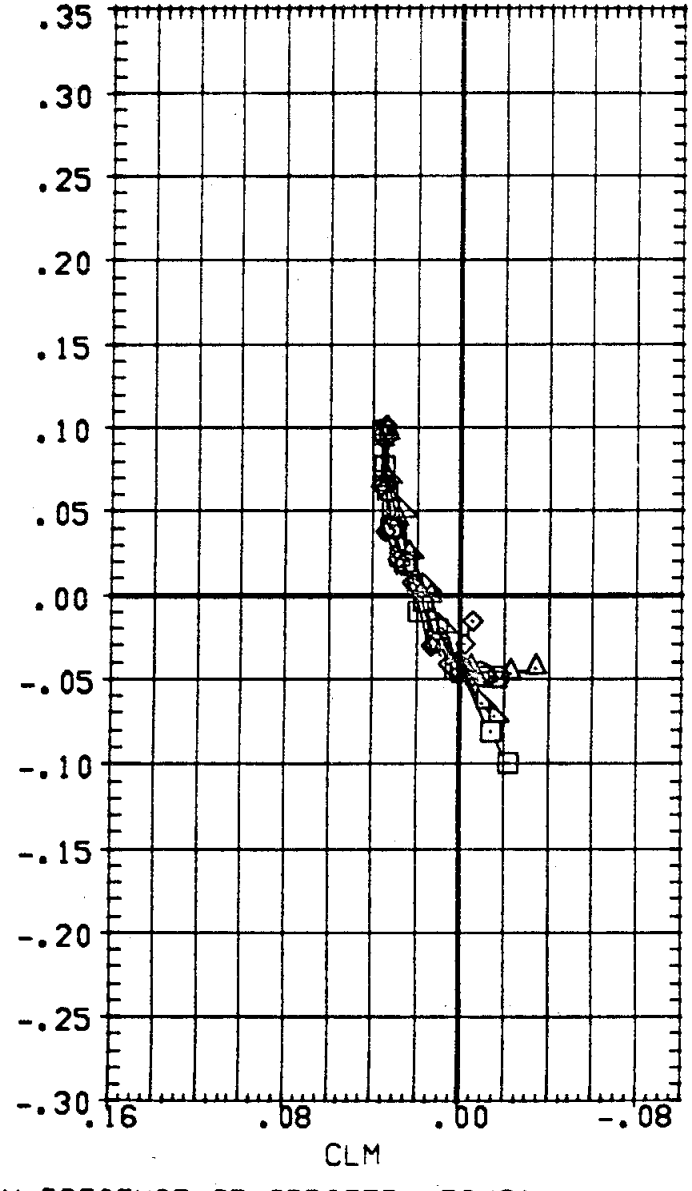
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72103)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72104)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72105)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72106)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





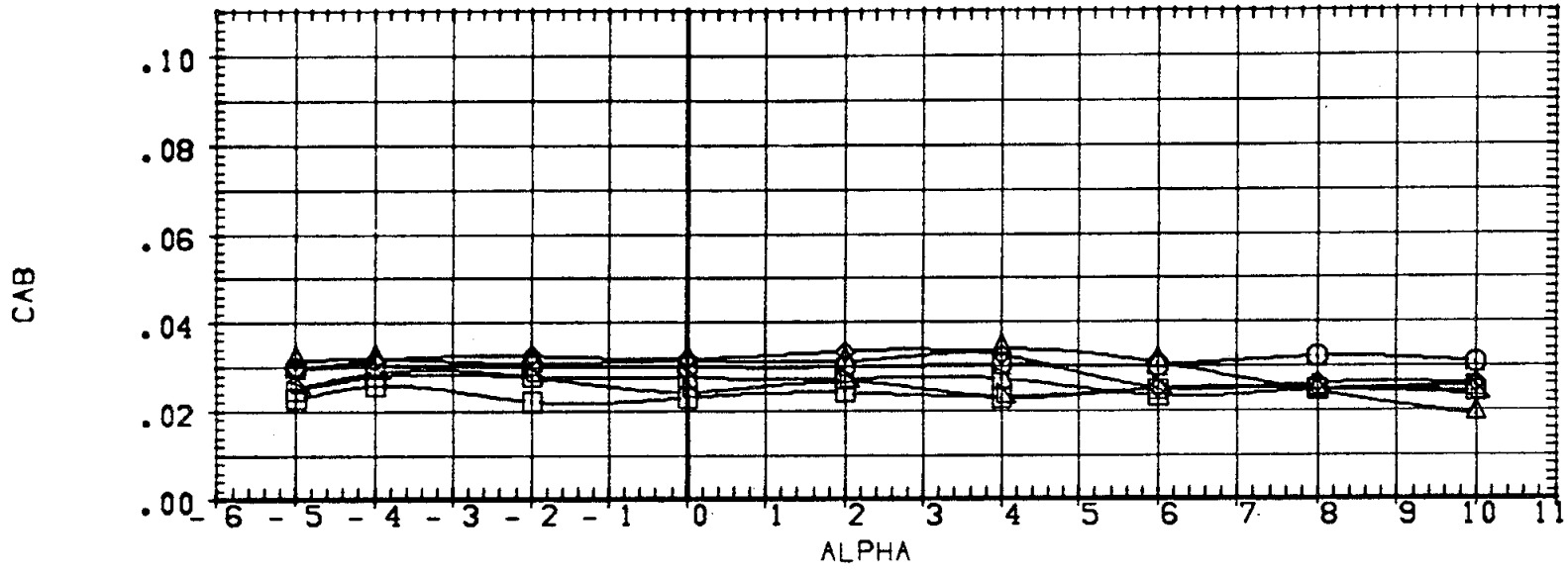


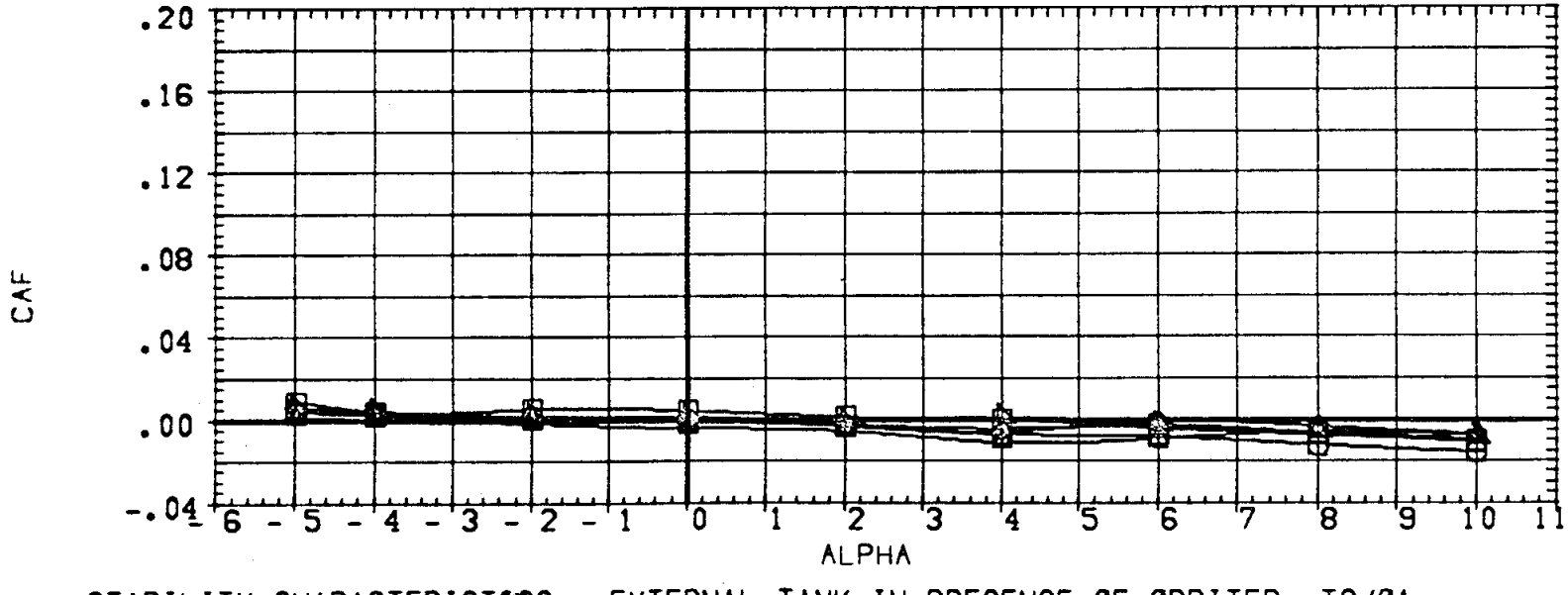
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.120	10.000	
(A72102)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.120	10.000	
(A72103)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.120	10.000	
(A72104)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.240	10.000	
(A72105)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.240	10.000	
(A72106)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



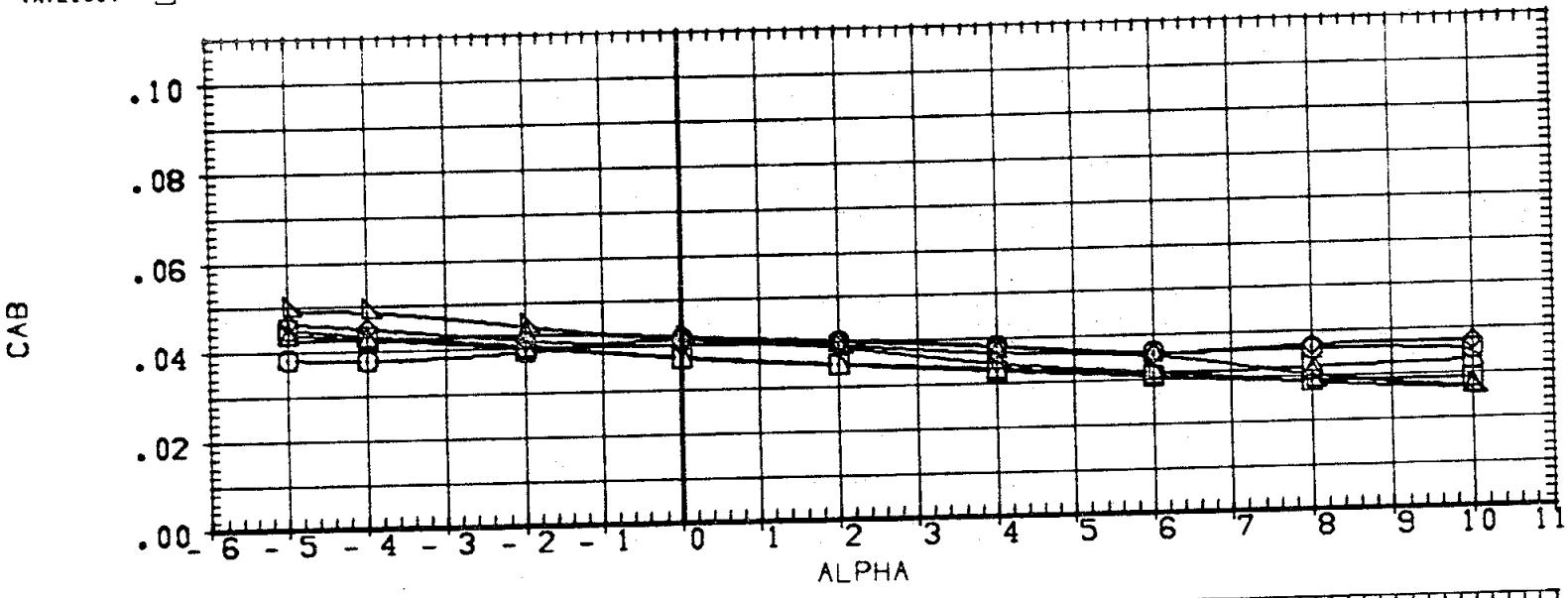


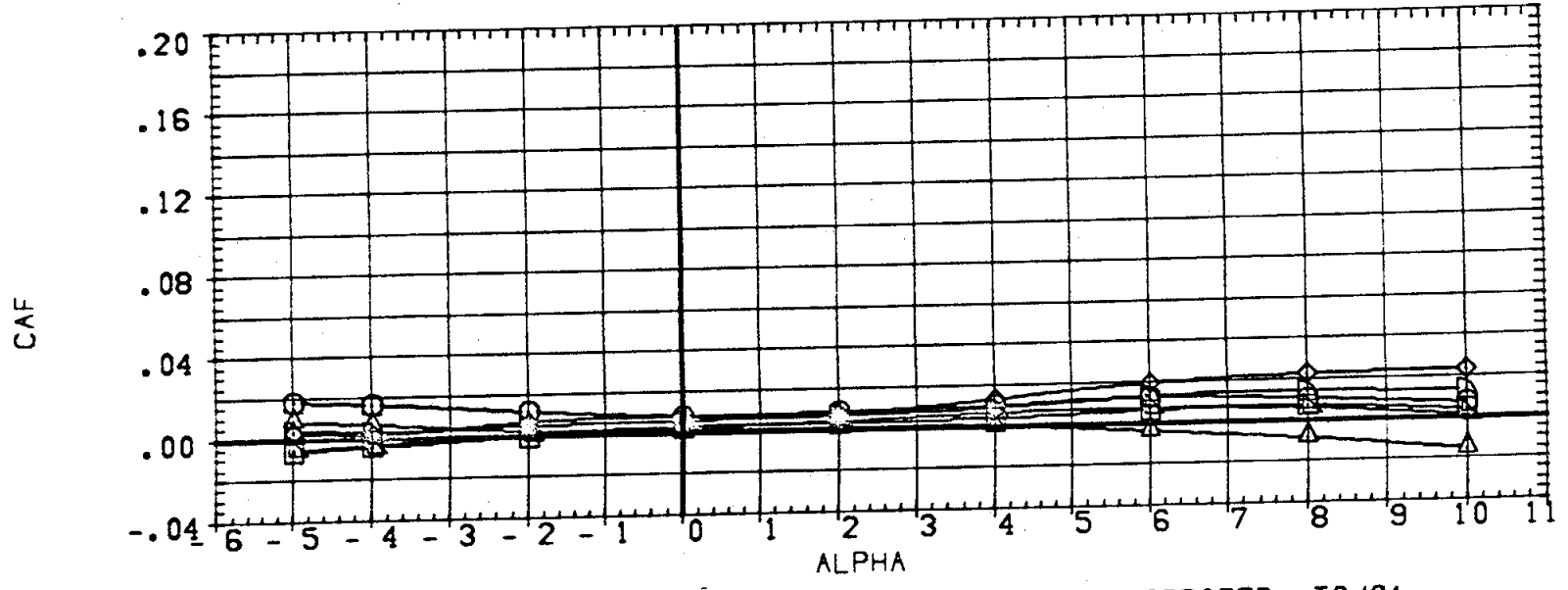
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.120	10.000	
(A72102)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.120	10.000	
(A72103)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.120	10.000	
(A72104)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.240	10.000	
(A72105)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.240	10.000	
(A72106)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





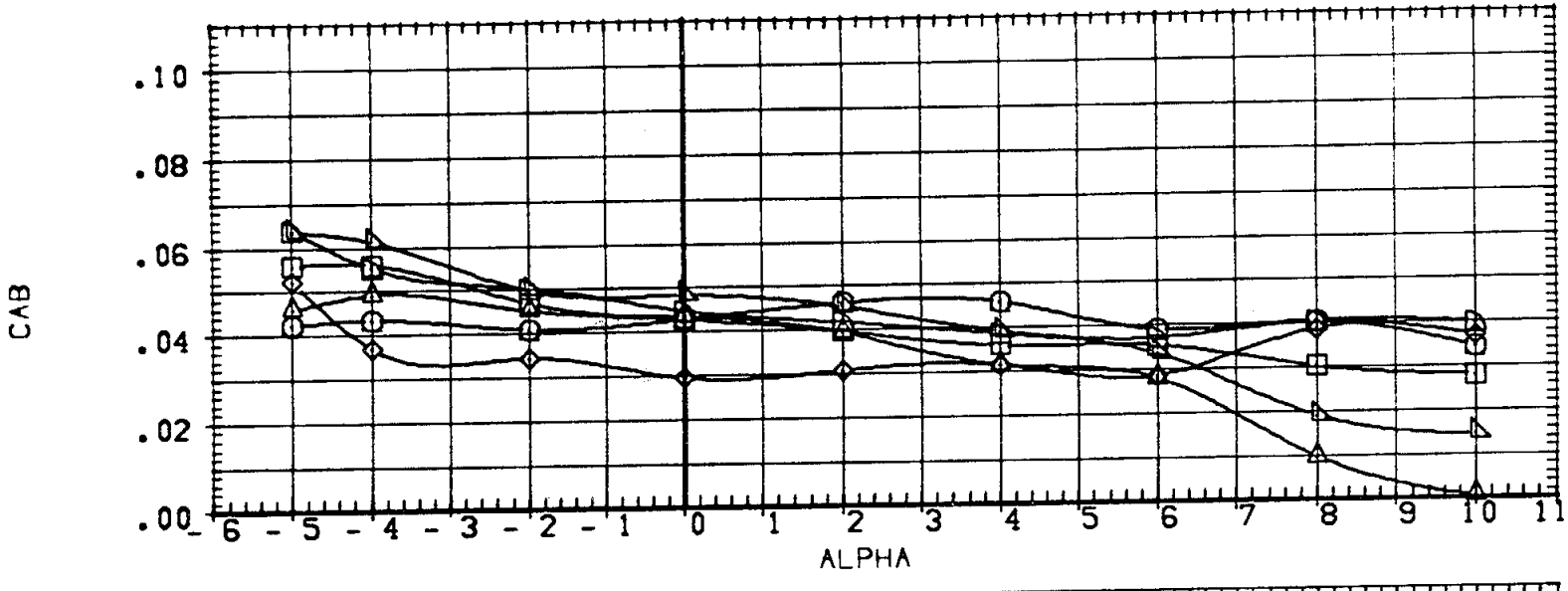
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

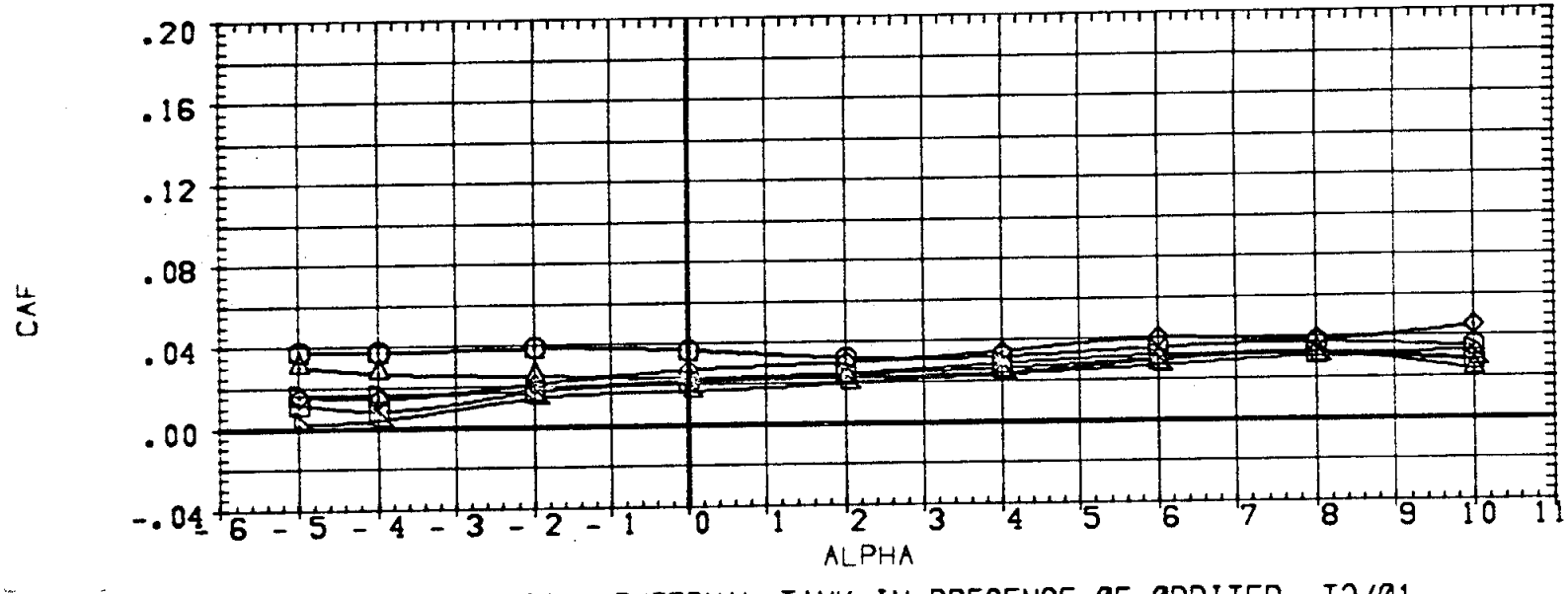
(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72102)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72103)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72104)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72105)	▷	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(A72106)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



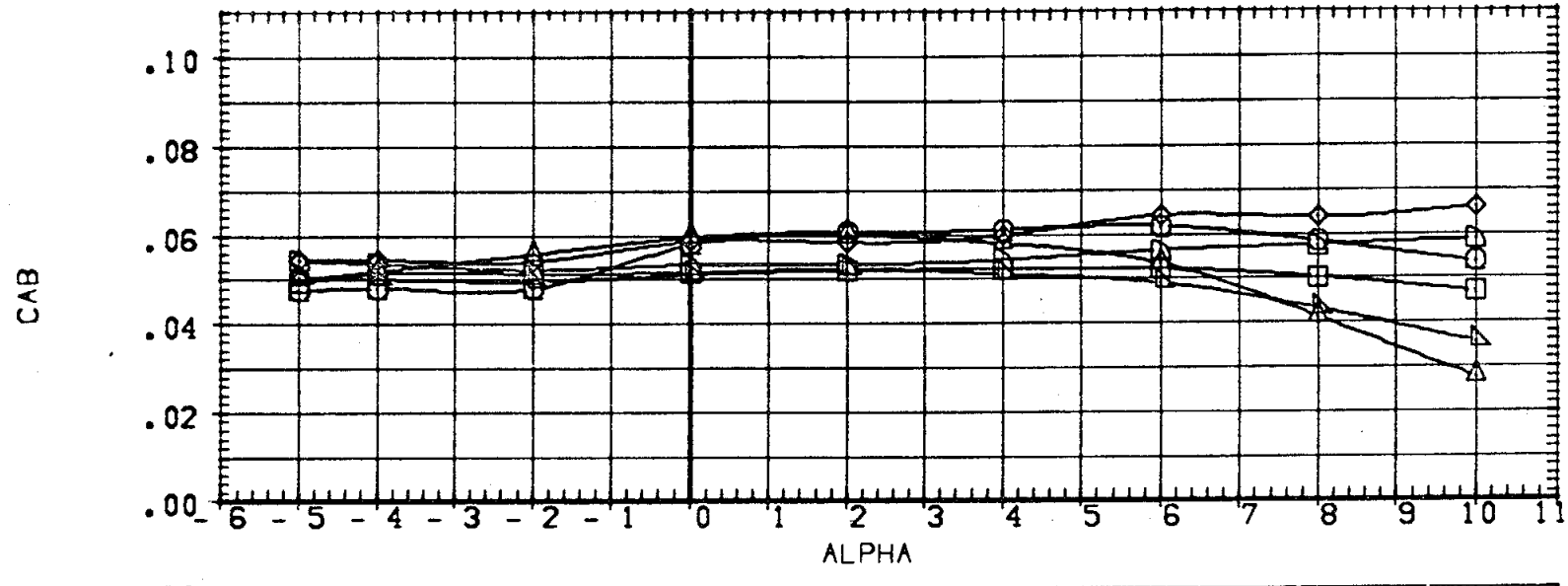


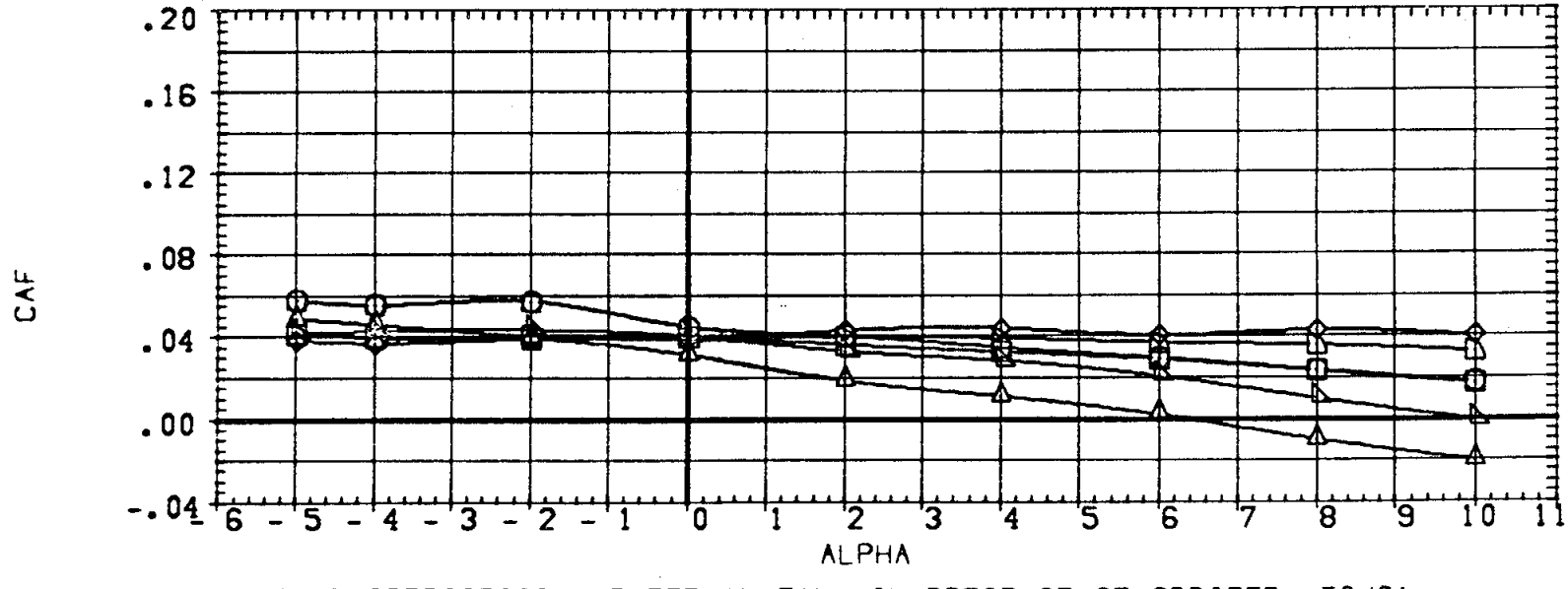
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.120	10.000	
(A72102)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.120	10.000	
(A72103)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.120	10.000	
(A72104)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.240	10.000	
(A72105)	⬠	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.240	10.000	
(A72106)	⬡	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



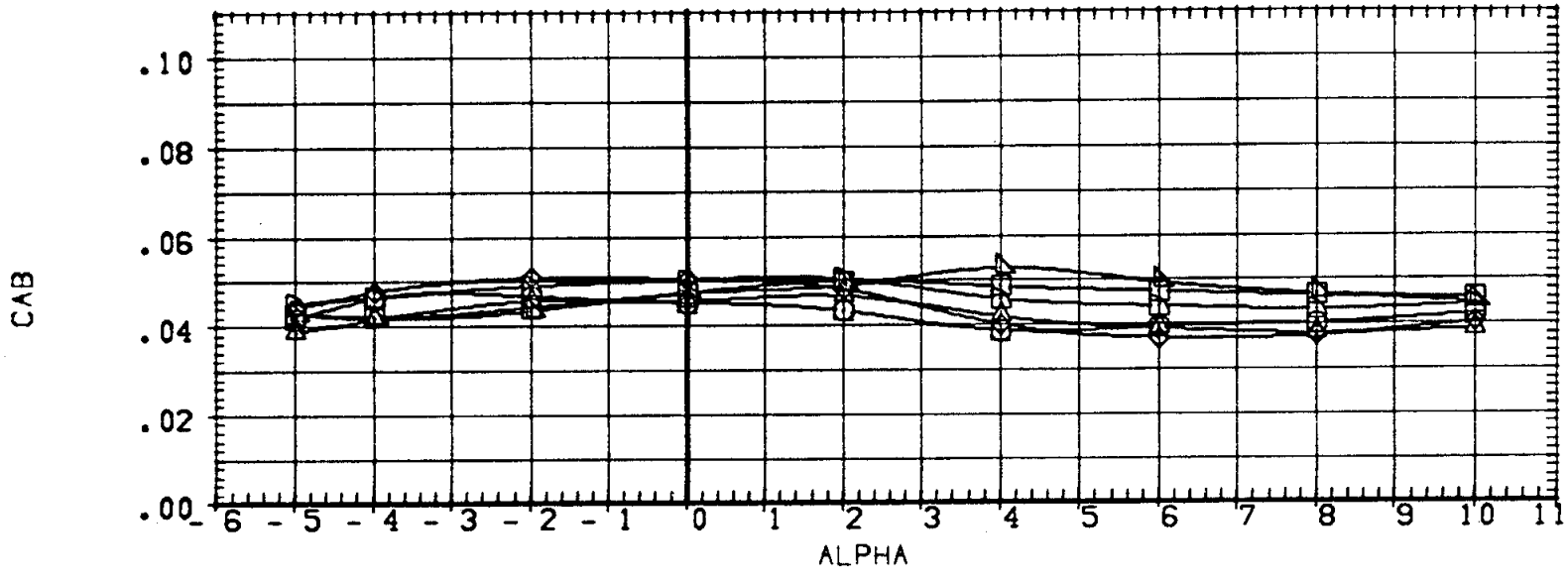


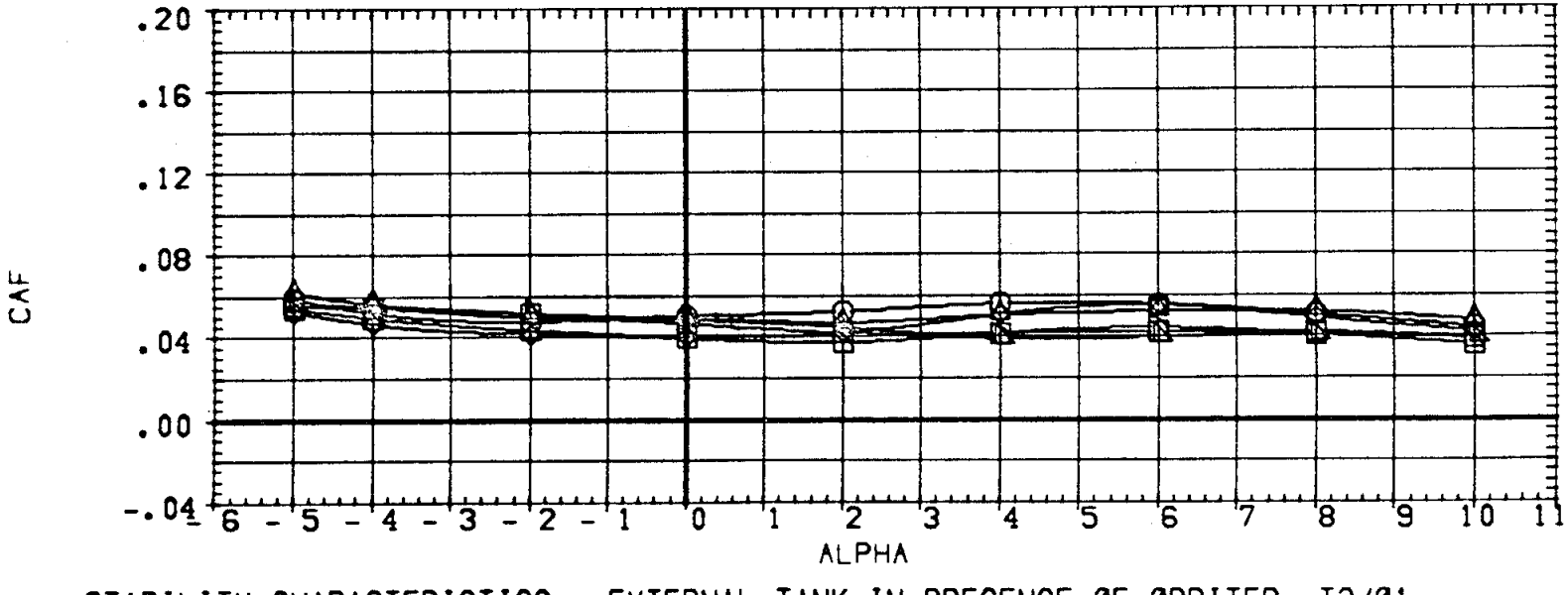
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

(D)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	.000	.120	10.000	
(A72102)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	-1.200	.120	10.000	
(A72103)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72104)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	.000	.240	10.000	
(A72105)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	-1.200	.240	10.000	
(A72106)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



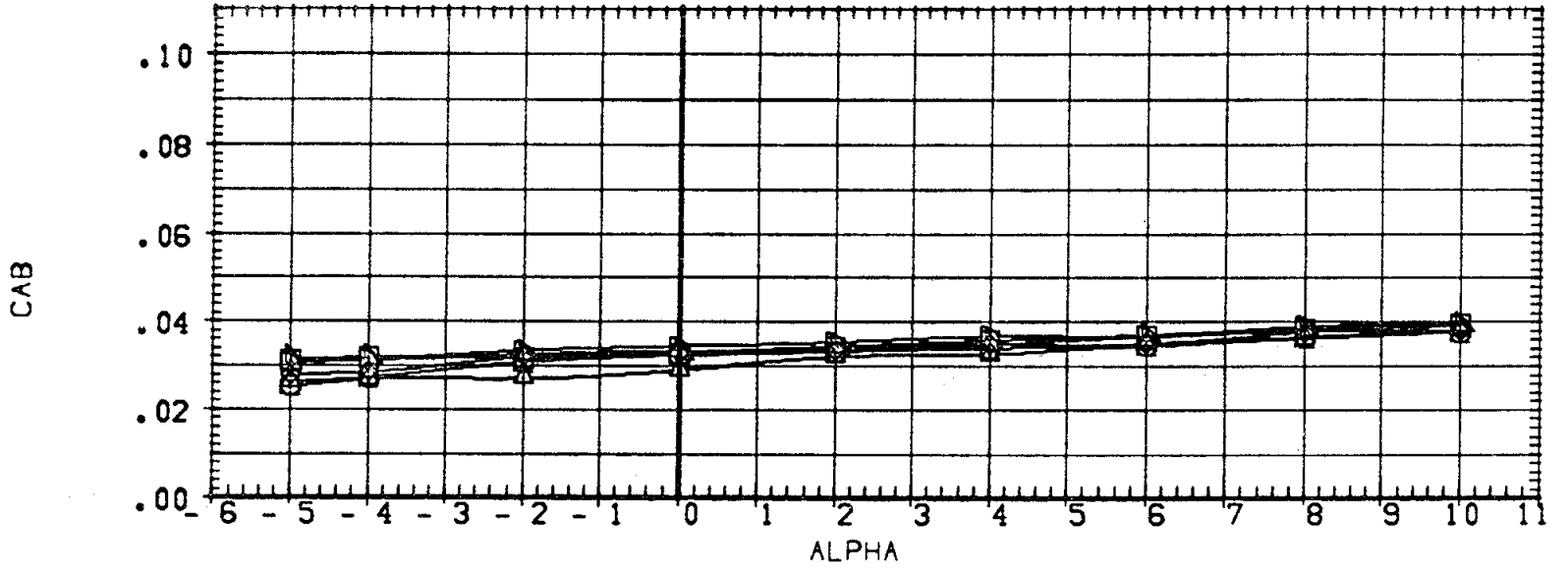


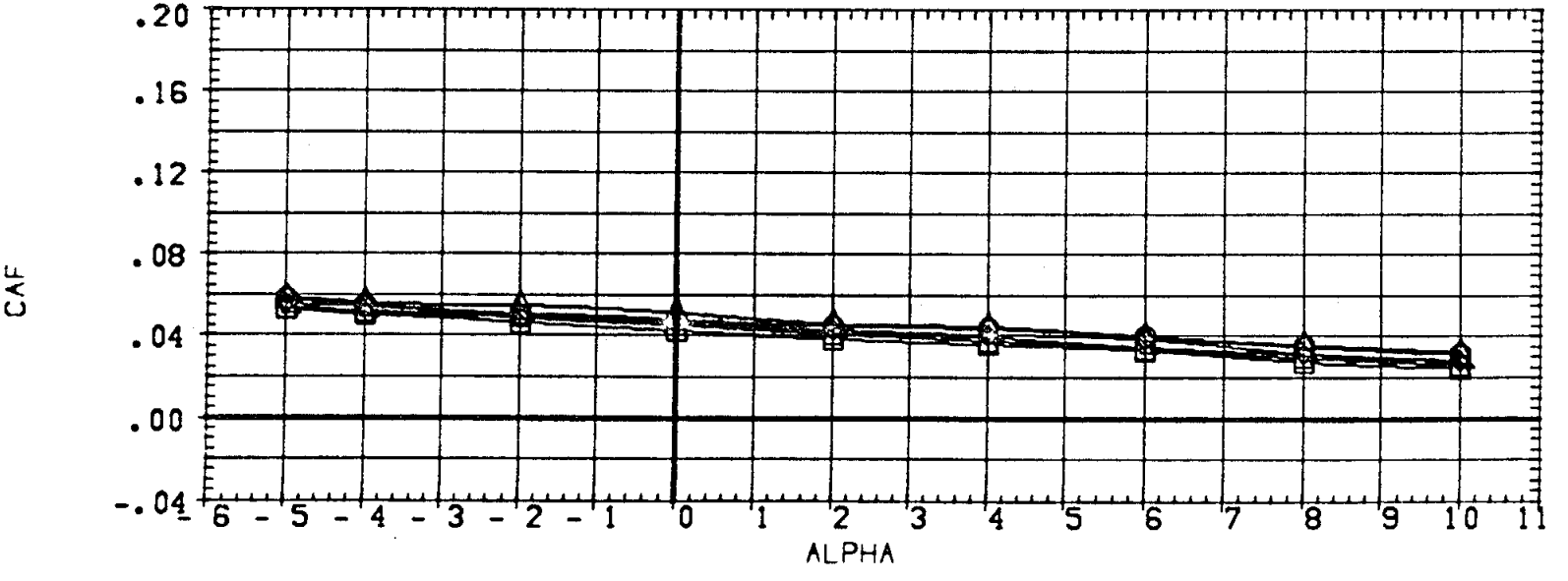
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	.000	.120	10.000	
(A72102)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	-1.200	.120	10.000	
(A72103)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72104)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	.000	.240	10.000	
(A72105)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	-1.200	.240	10.000	
(A72106)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



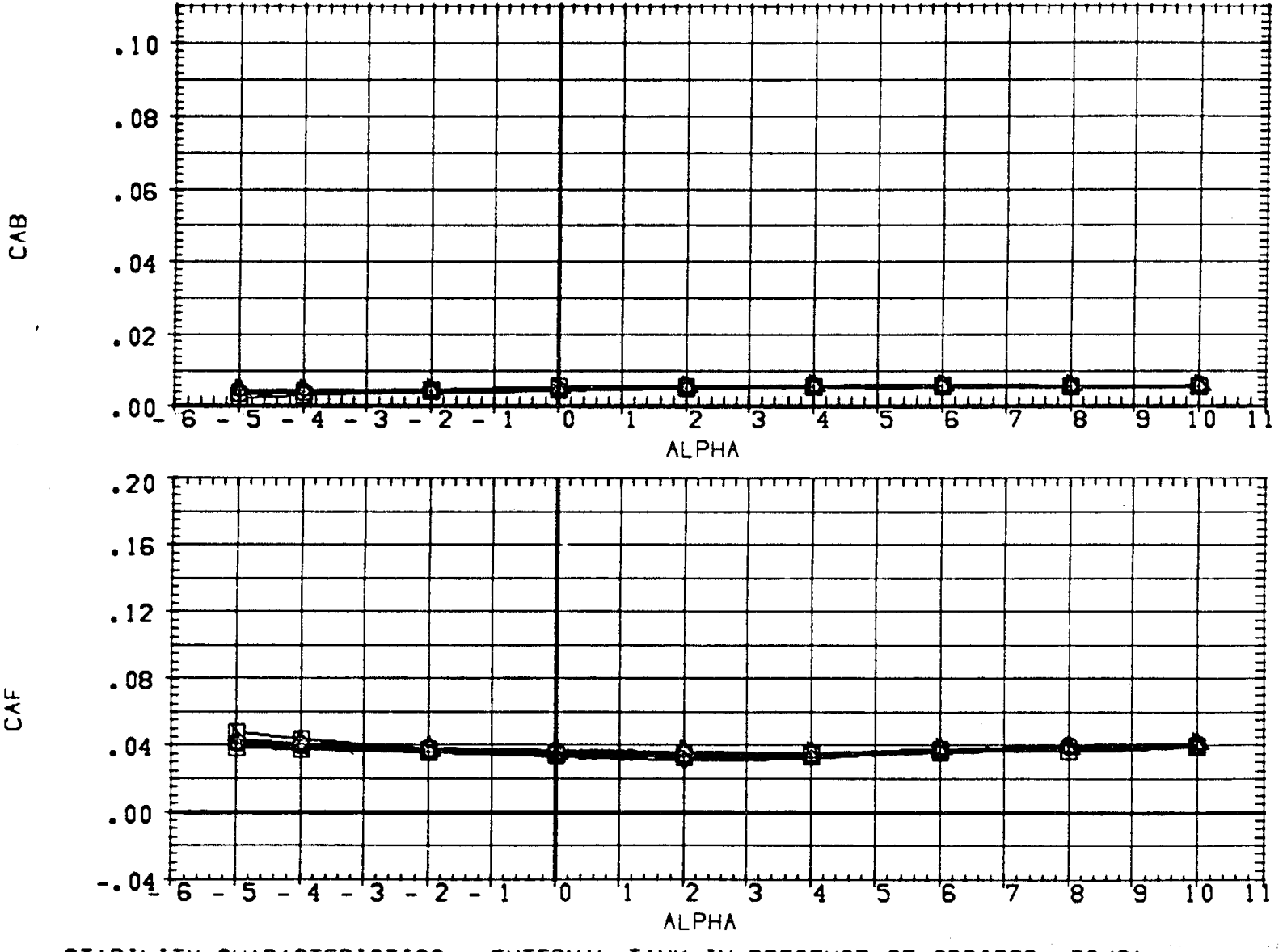


STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

(F)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.120	10.000	
(A72102)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.120	10.000	
(A72103)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.120	10.000	
(A72104)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.240	10.000	
(A72105)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.240	10.000	
(A72106)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

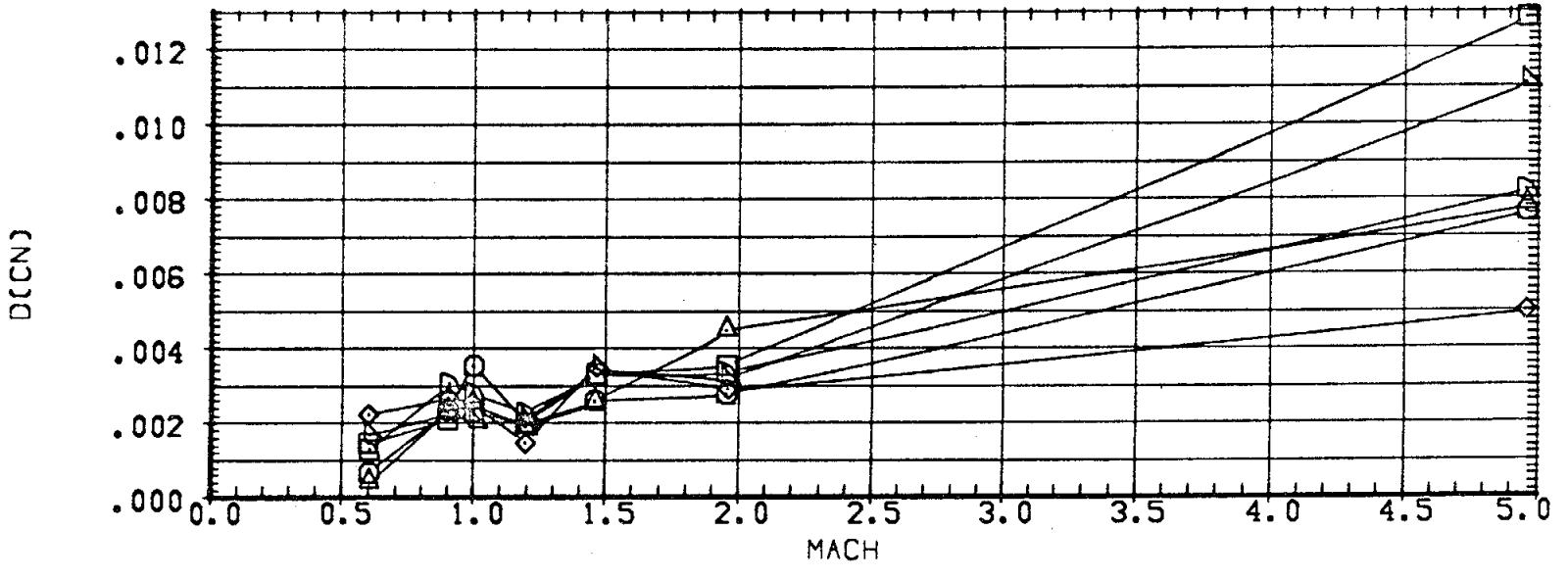


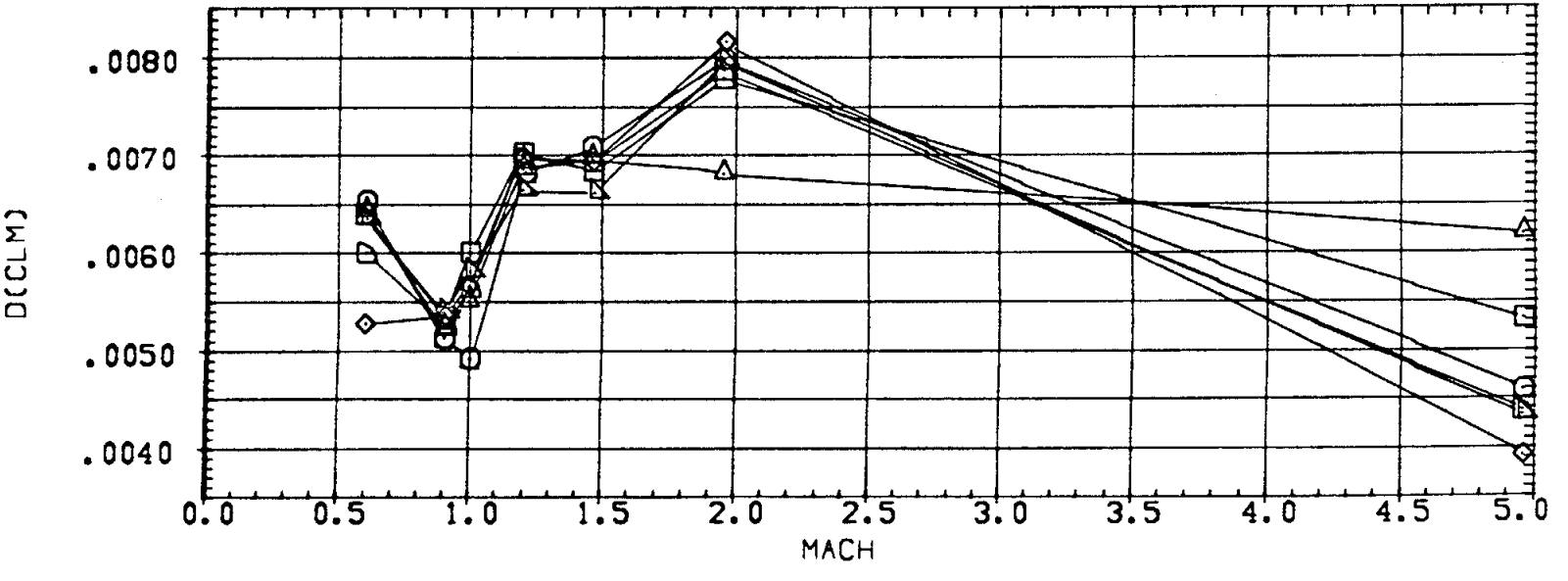
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872101)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.120	10.000	
(872102)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.120	10.000	
(872103)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.120	10.000	
(872104)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	.000	.240	10.000	
(872105)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	-1.200	.240	10.000	
(872106)		MSFC 545 (IA1) MOD ATP LV-(T3)/(01)	1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



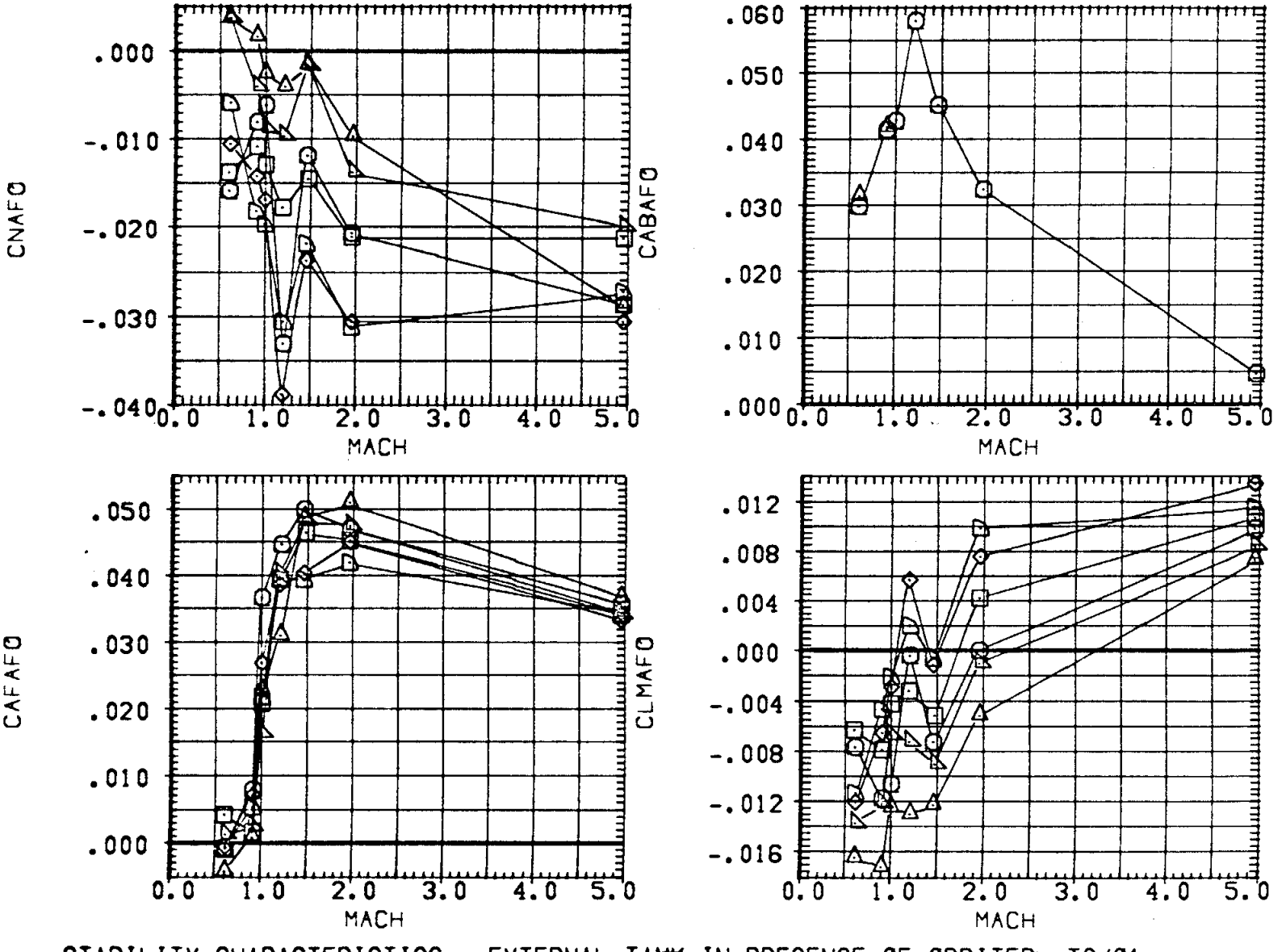


STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(872101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(872102)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(872103)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(872104)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(872105)	▷	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)
(872106)	⬠	MSFC 545 (IA1) MOD ATP LV-(T3)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
-1.200	.120	10.000	
1.500	.120	10.000	
.000	.240	10.000	
-1.200	.240	10.000	
1.500	.240	10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

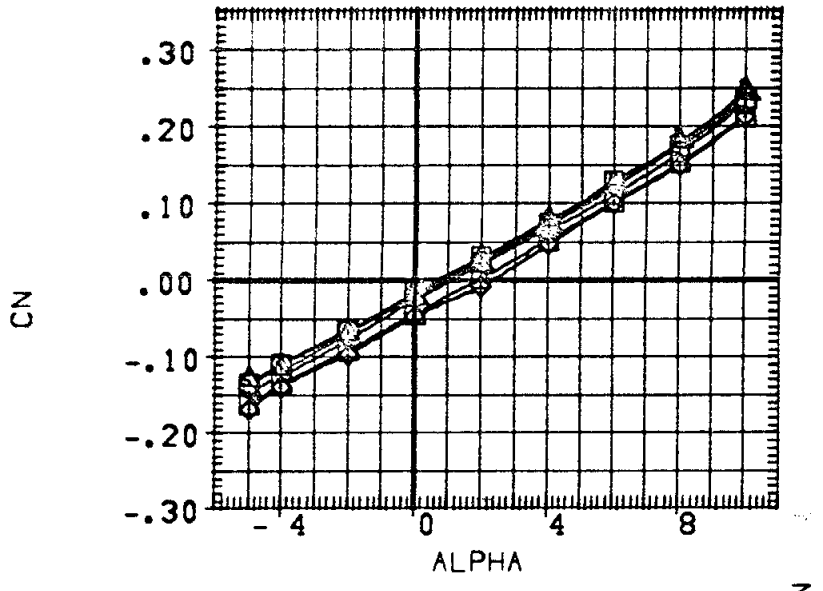


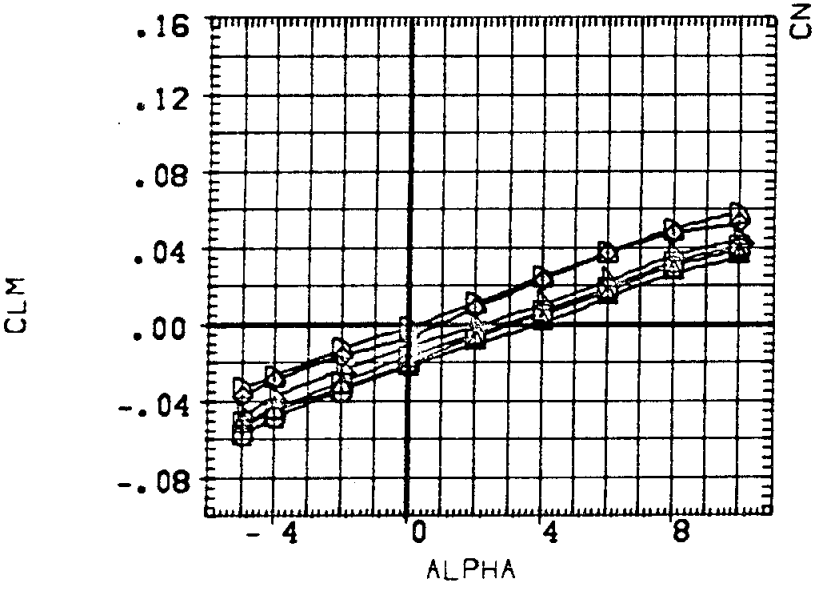
STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

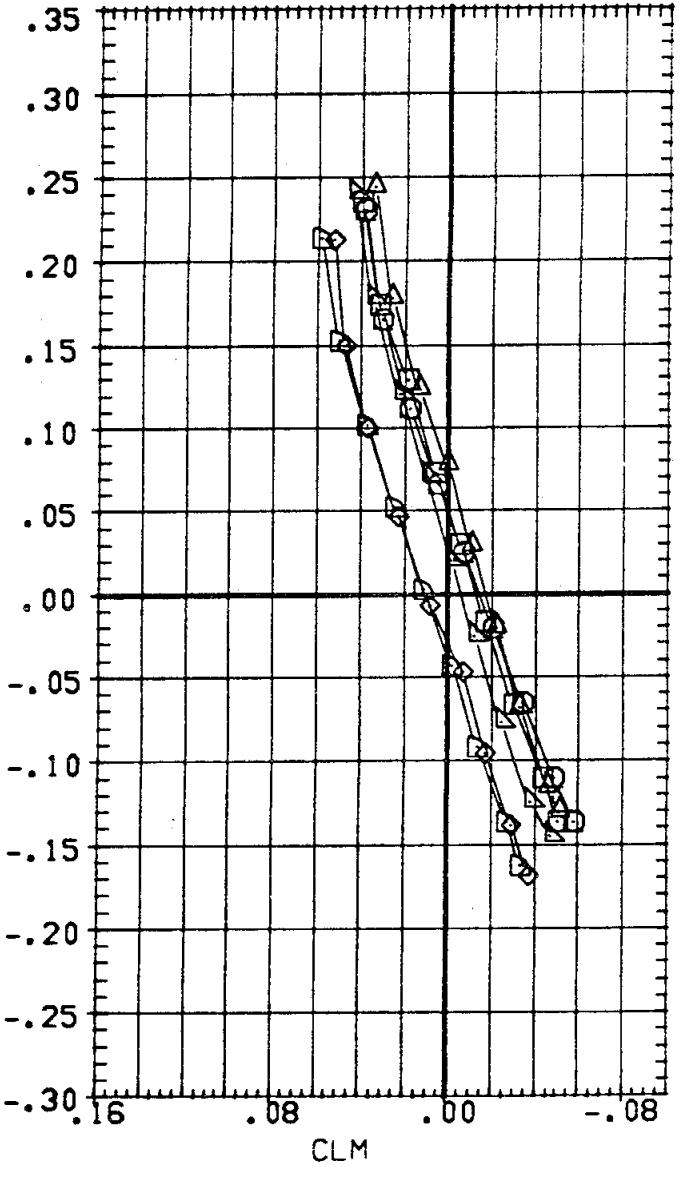
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72106)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72109)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72110)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72111)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72112)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72113)	⬡	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







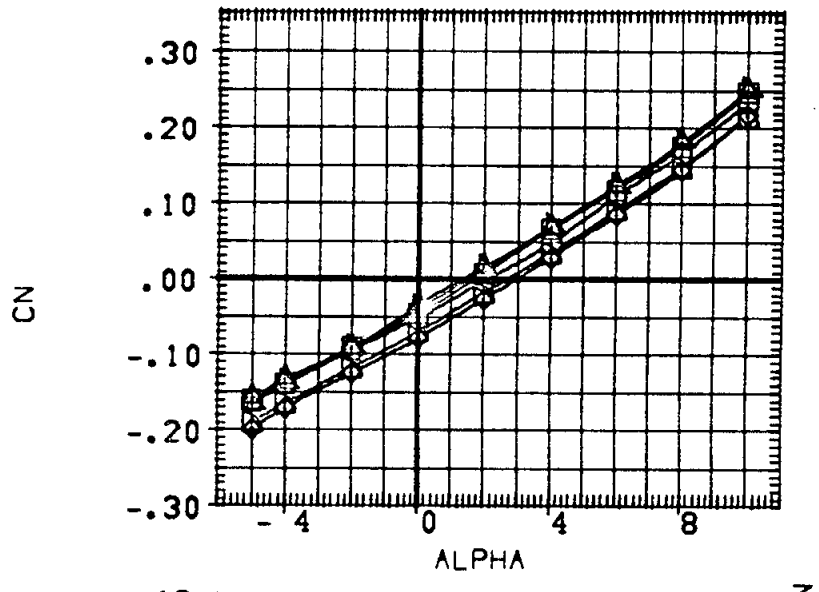
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

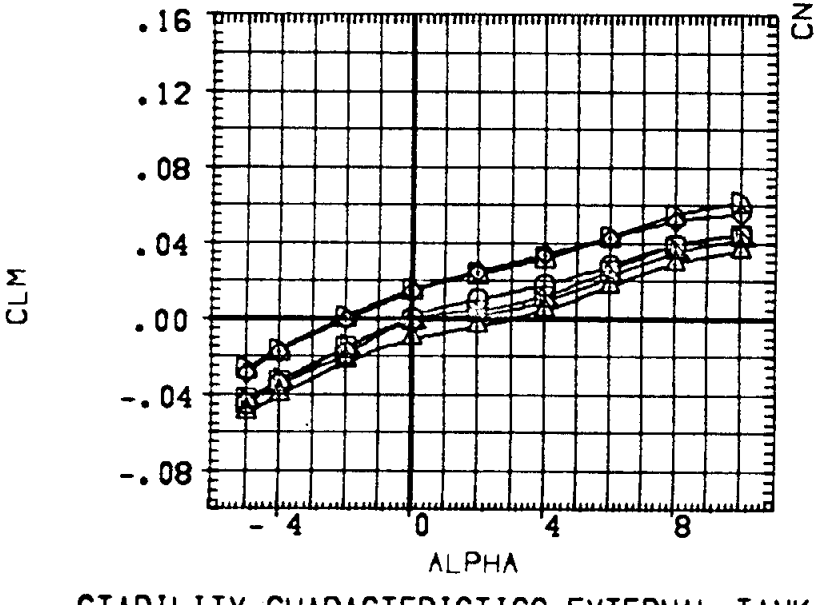
(A)MACH = .60

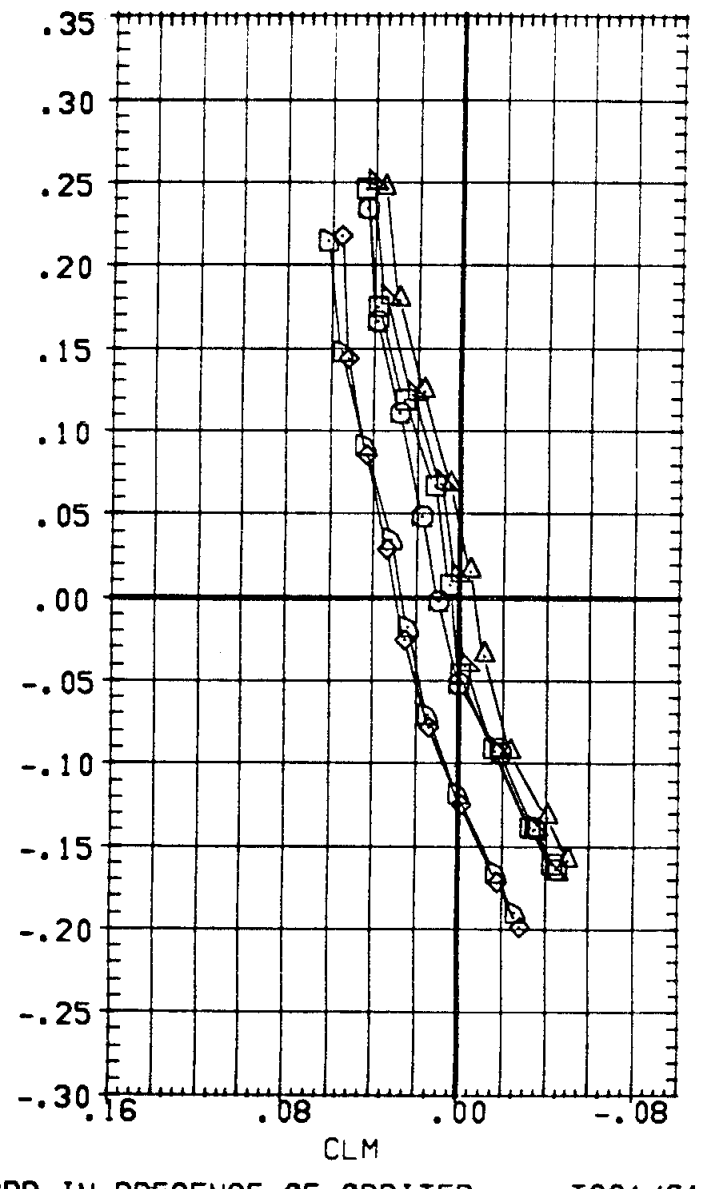
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72111)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72112)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72113)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







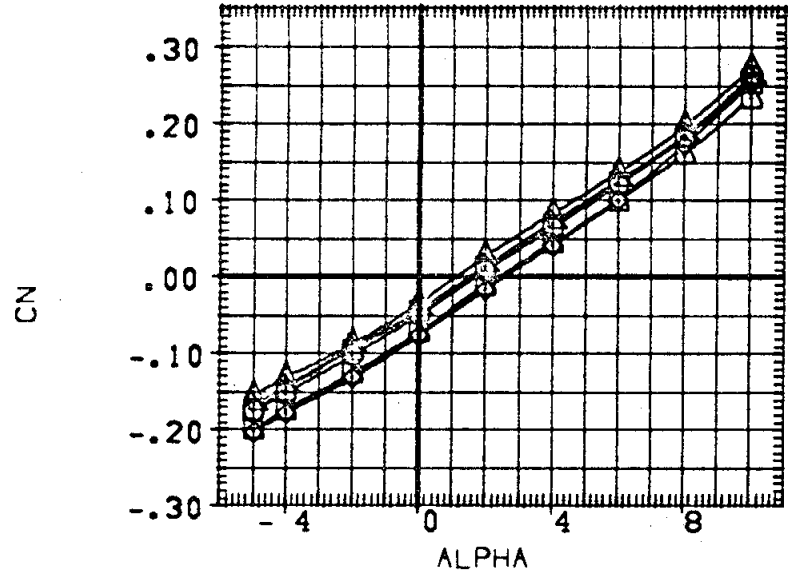
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

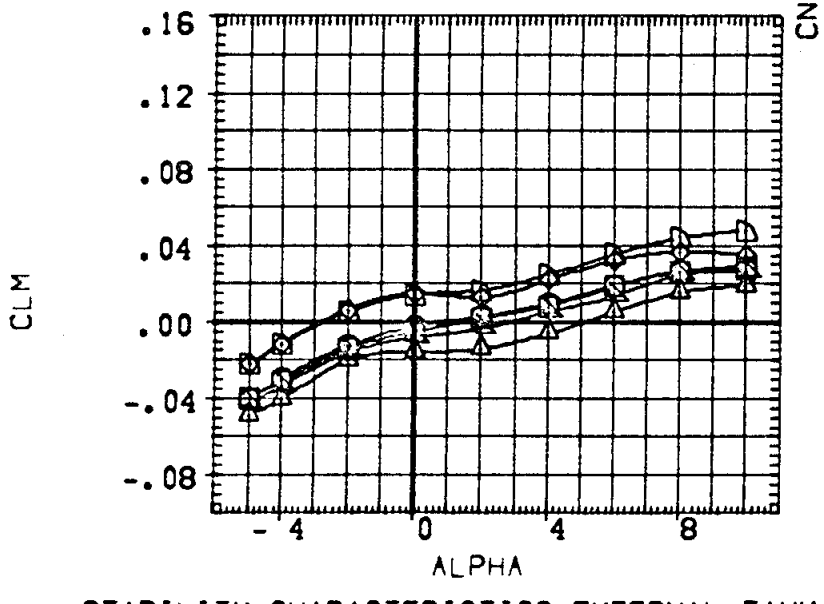
(B)MACH = .80

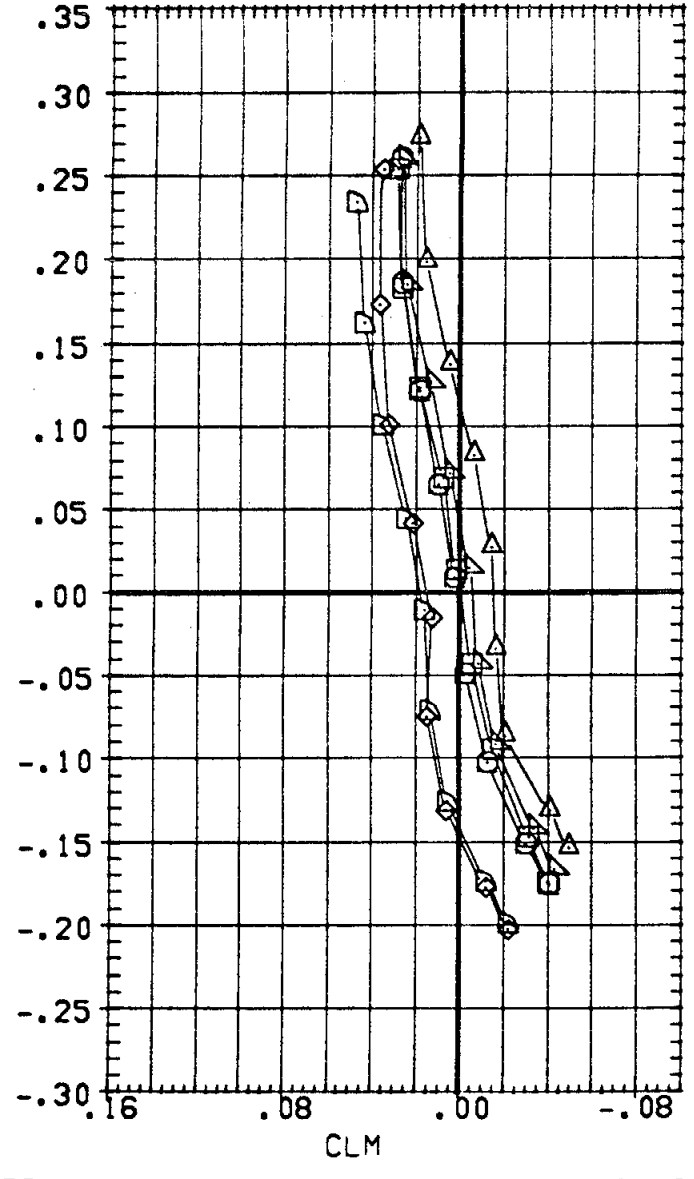
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72111)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72112)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72113)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







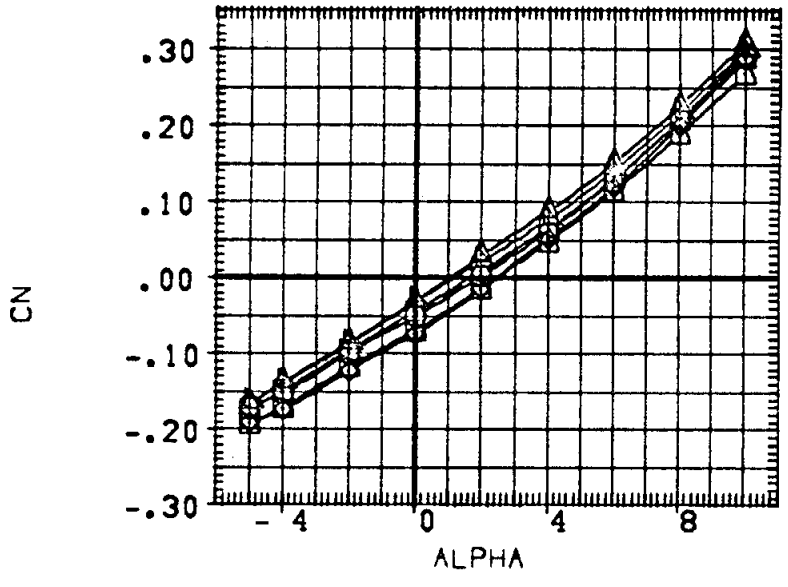
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

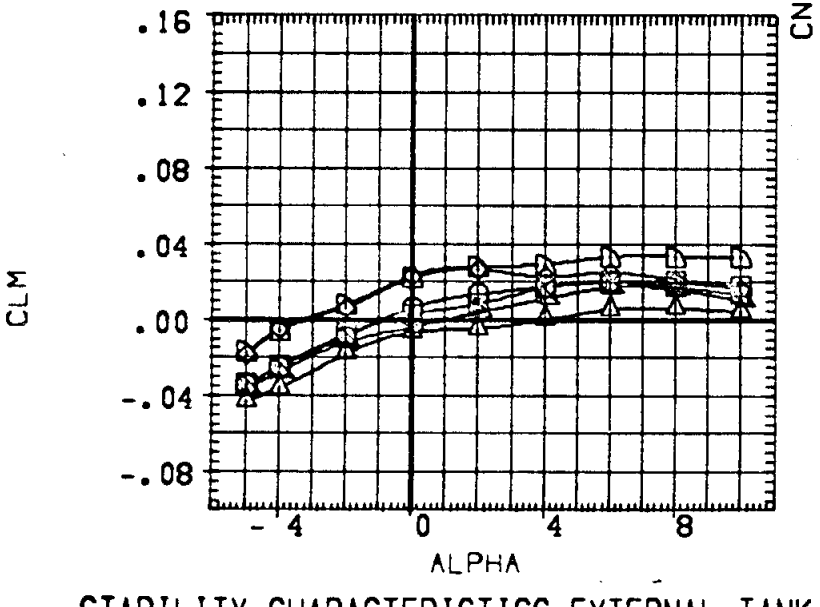
(C)MACH = .90

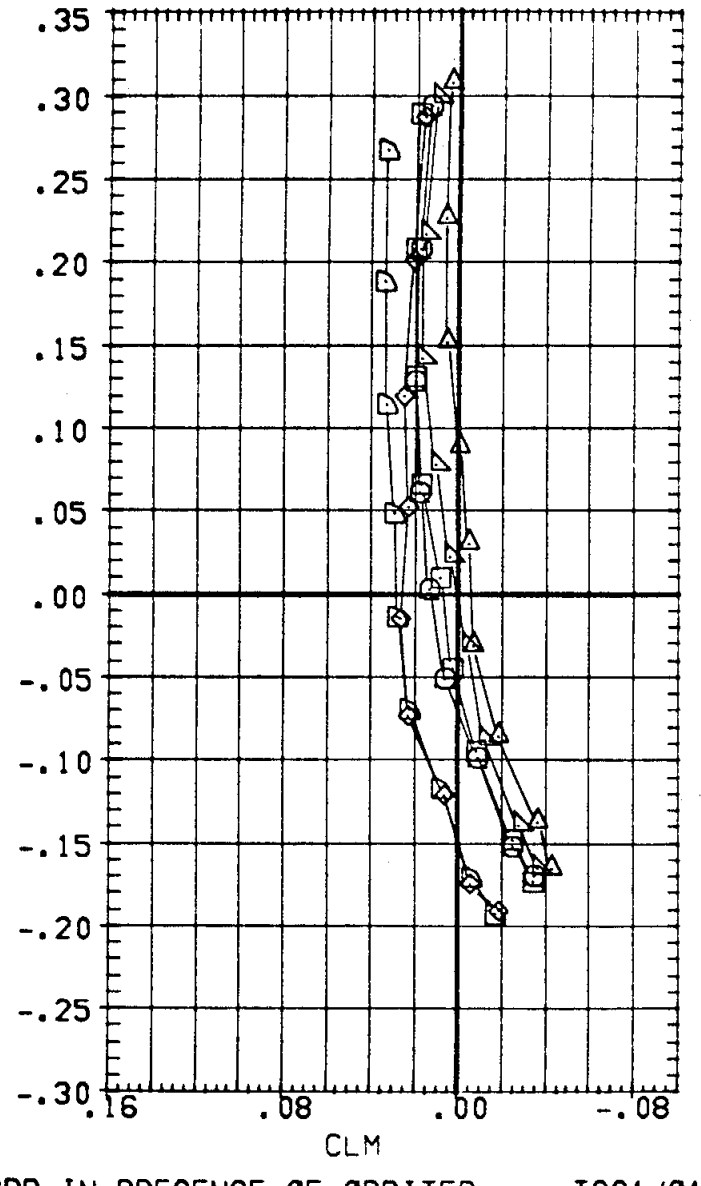
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72111)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72112)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72113)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3228.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





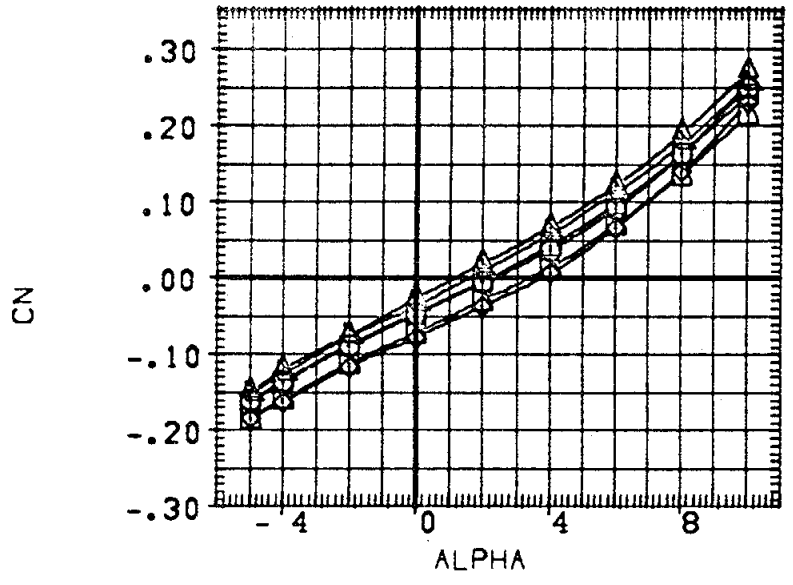


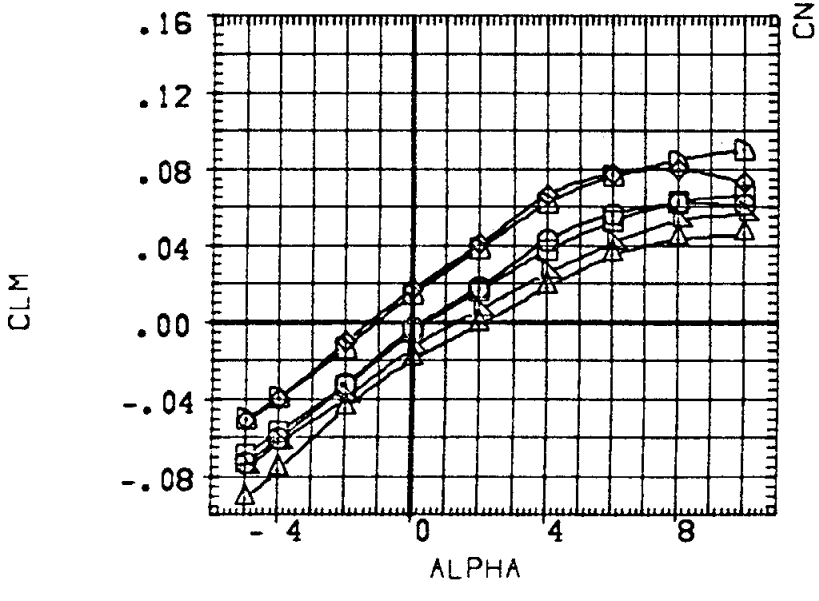
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

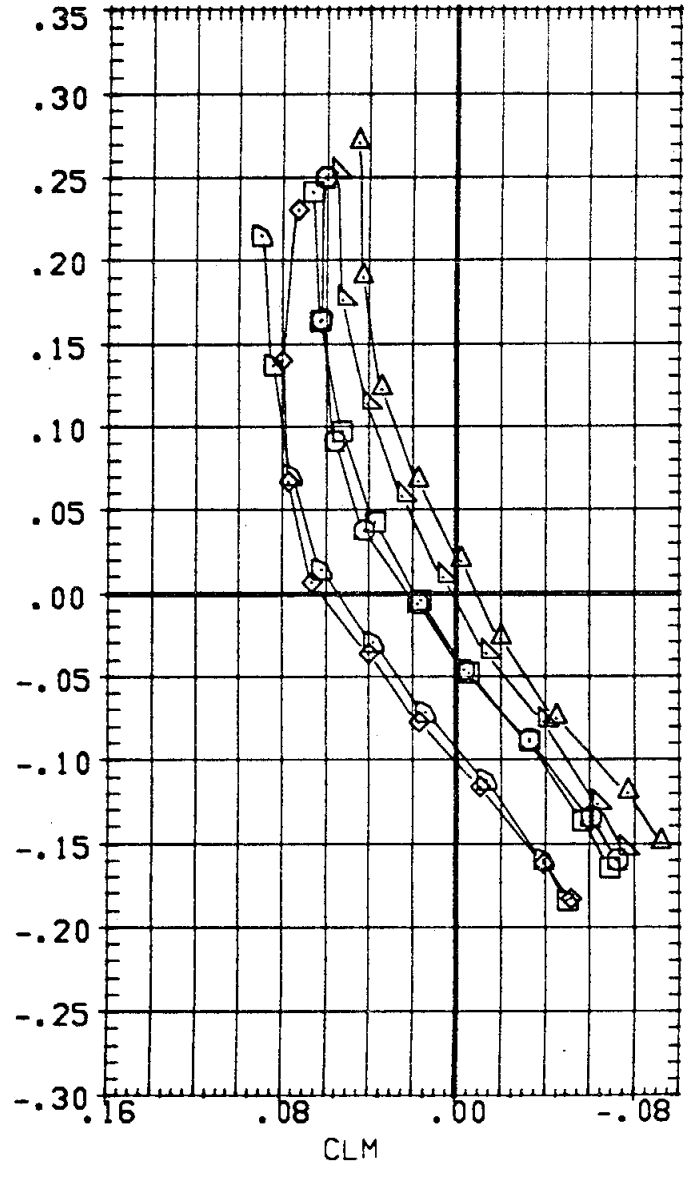
(O)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)		HSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72109)		HSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	.000
(A72110)		HSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(A72111)		HSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	.000
(A72112)		HSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	.000
(A72113)		HSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





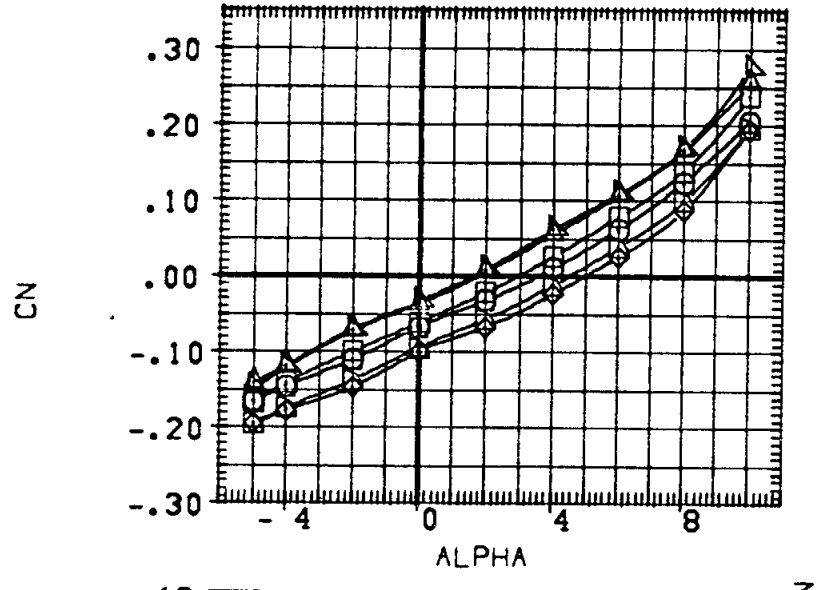


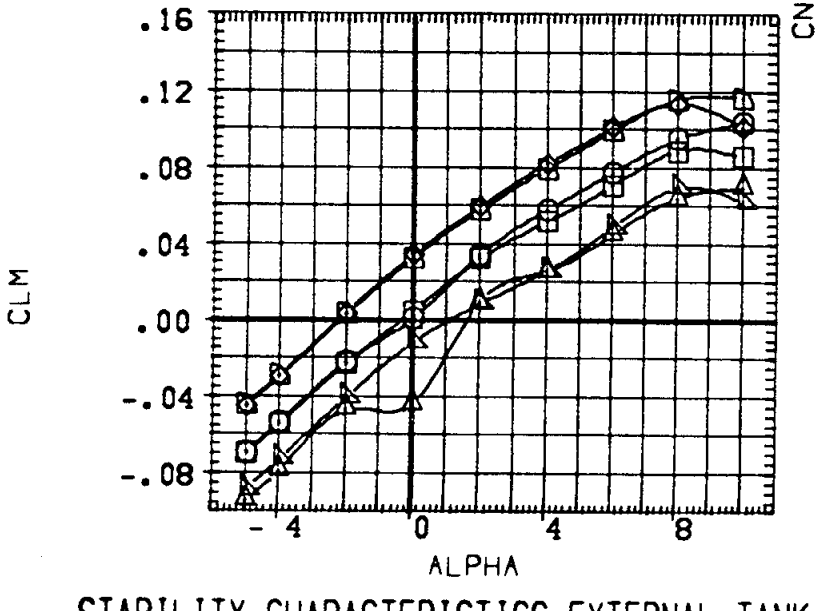
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

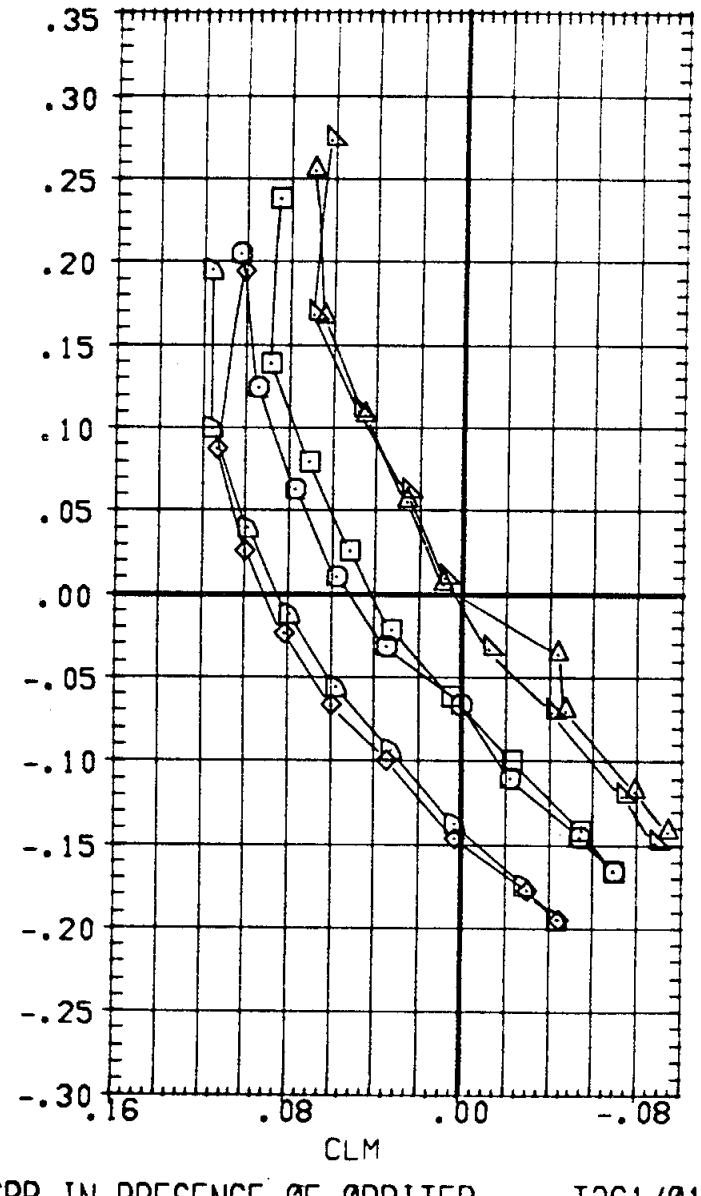
(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72108)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72109)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72110)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72111)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72112)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72113)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB	REFERENCE INFORMATION		
.000	.120	10.000	.000	SREF	3220.0000	SQ.FT.
-1.200	.120	10.000	.000	LREF	1328.0000	IN.
1.500	.120	10.000	.000	BREF	1328.0000	IN.
.000	.240	10.000	.000	XMRP	.0000	
-1.200	.240	10.000	.000	YMRP	.0000	
1.500	.240	10.000	.000	ZMRP	.0000	
				SCALE	100.0000	PERCNT





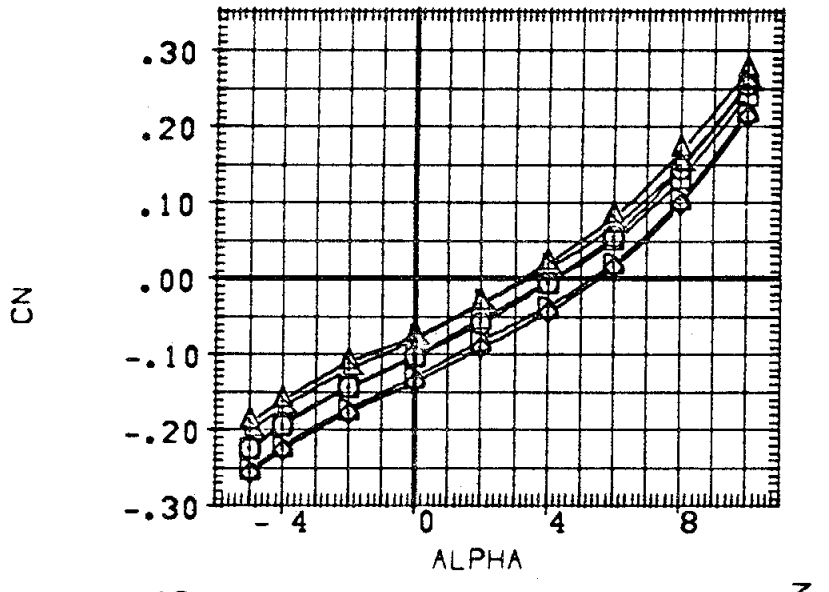


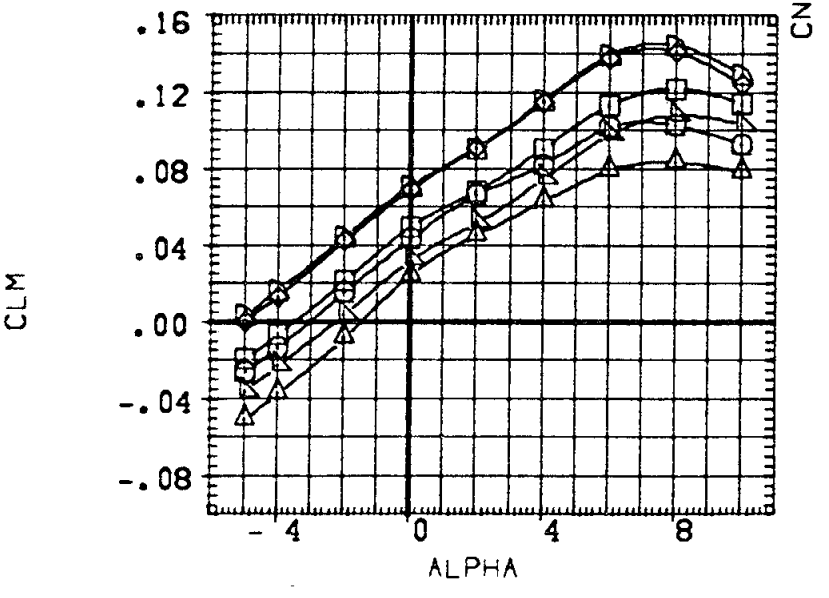
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

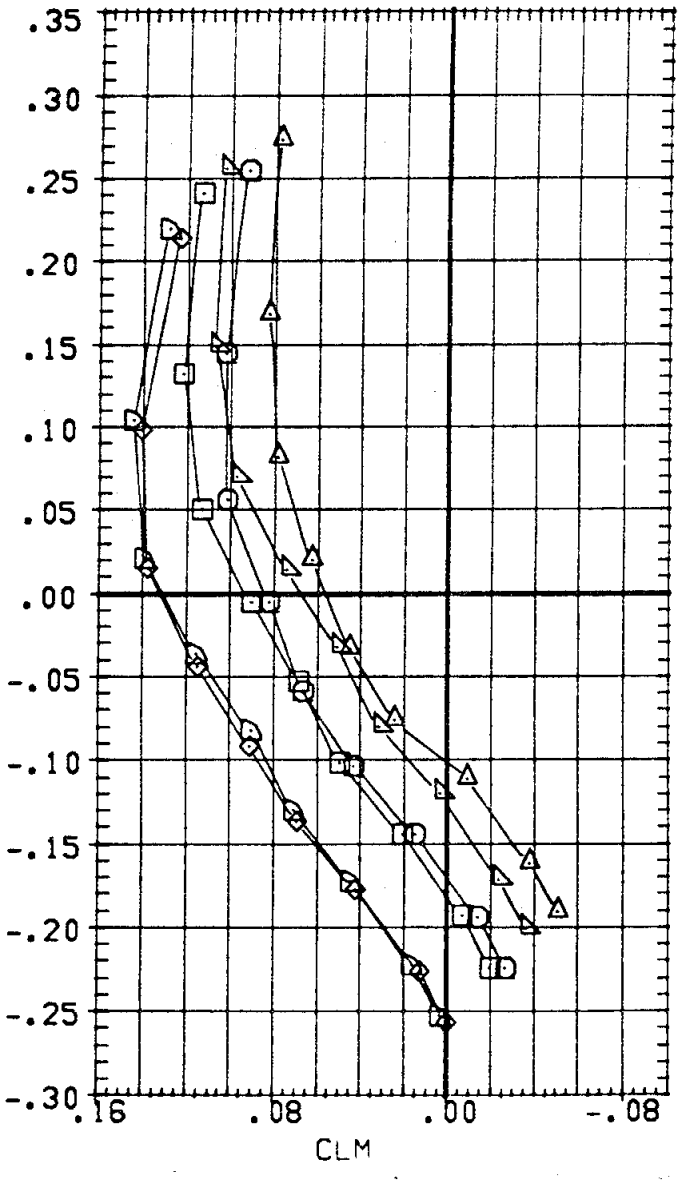
(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72106)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72109)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	.000
(A72110)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(A72111)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	.000
(A72112)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	.000
(A72113)	⬡	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





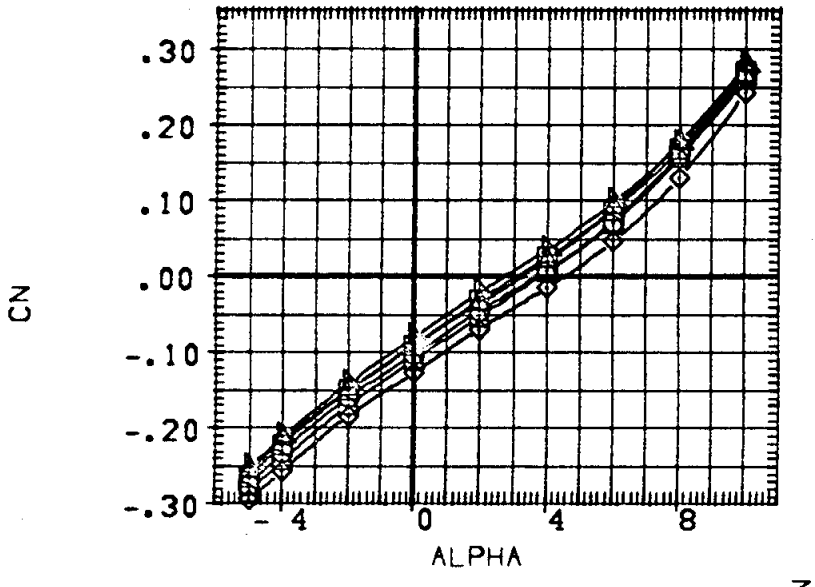


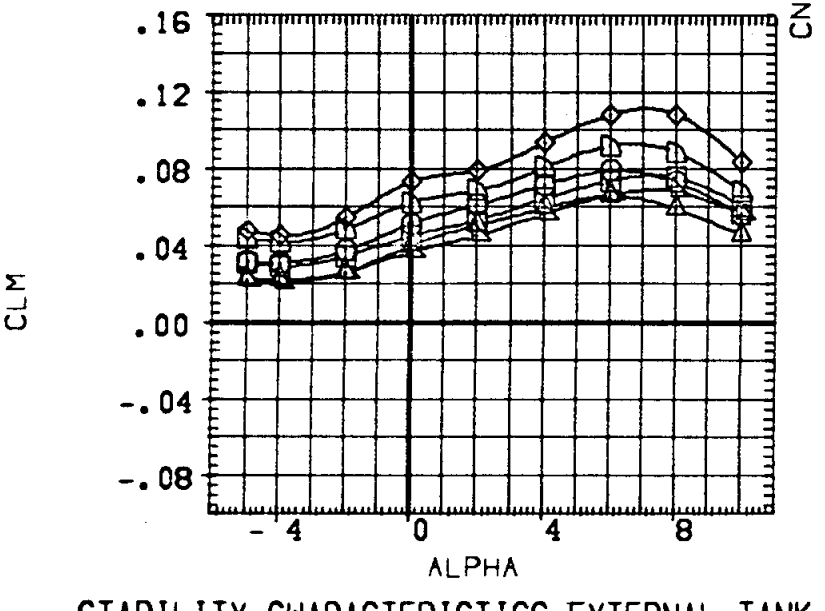
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

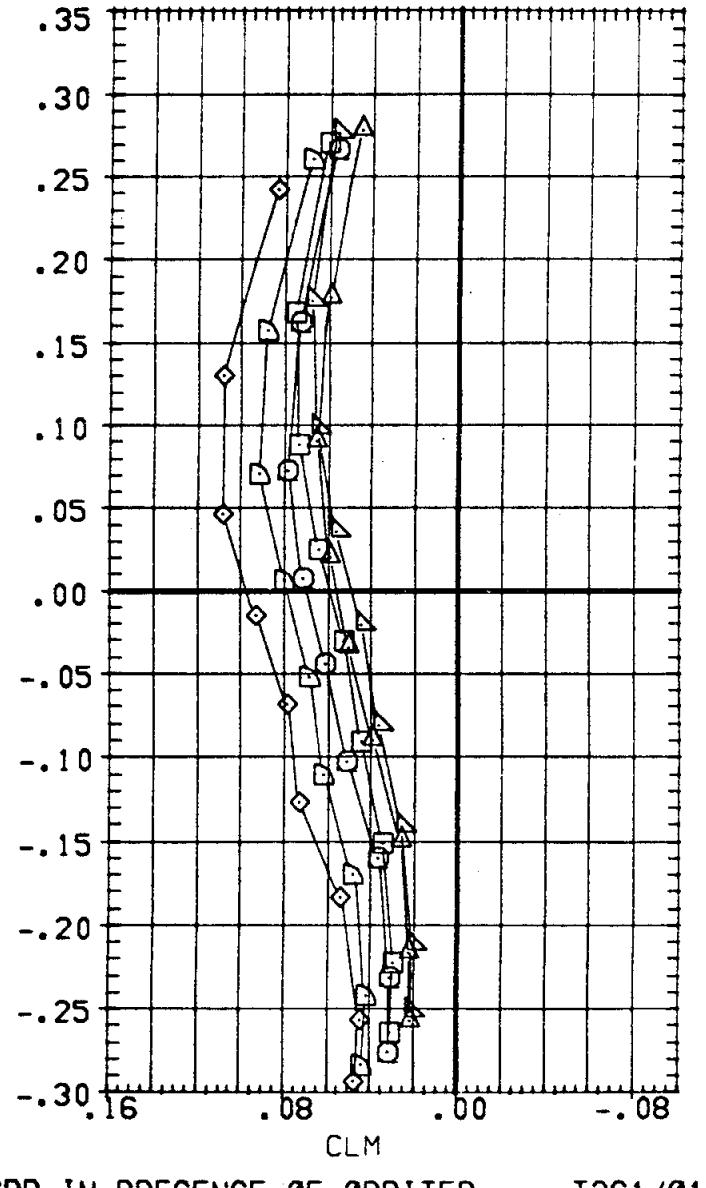
(G)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	.000
(A72110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(A72111)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	.000
(A72112)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	.000
(A72113)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







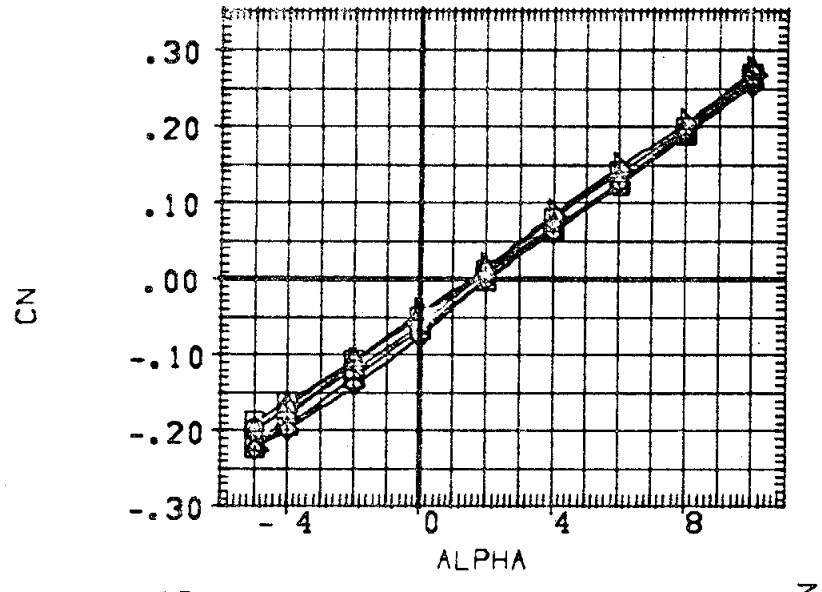
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

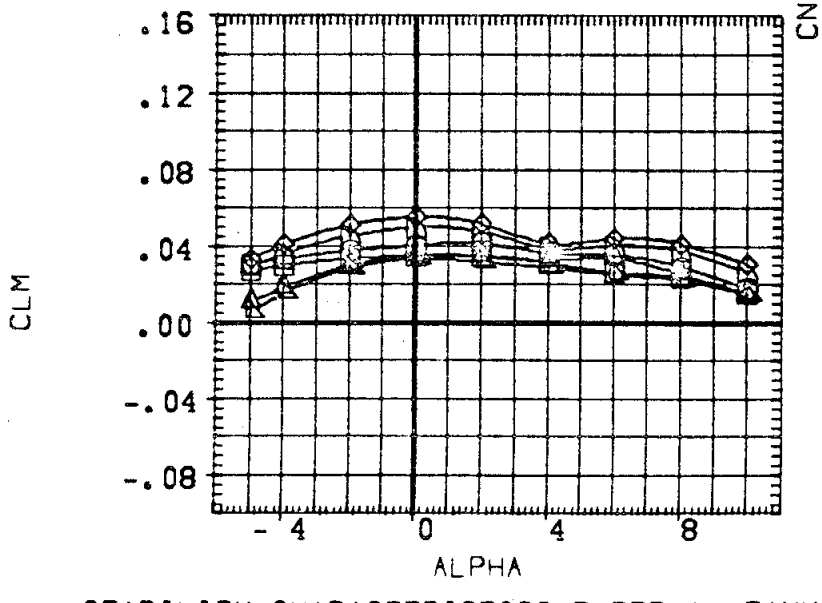
(H)MACH = 2.99

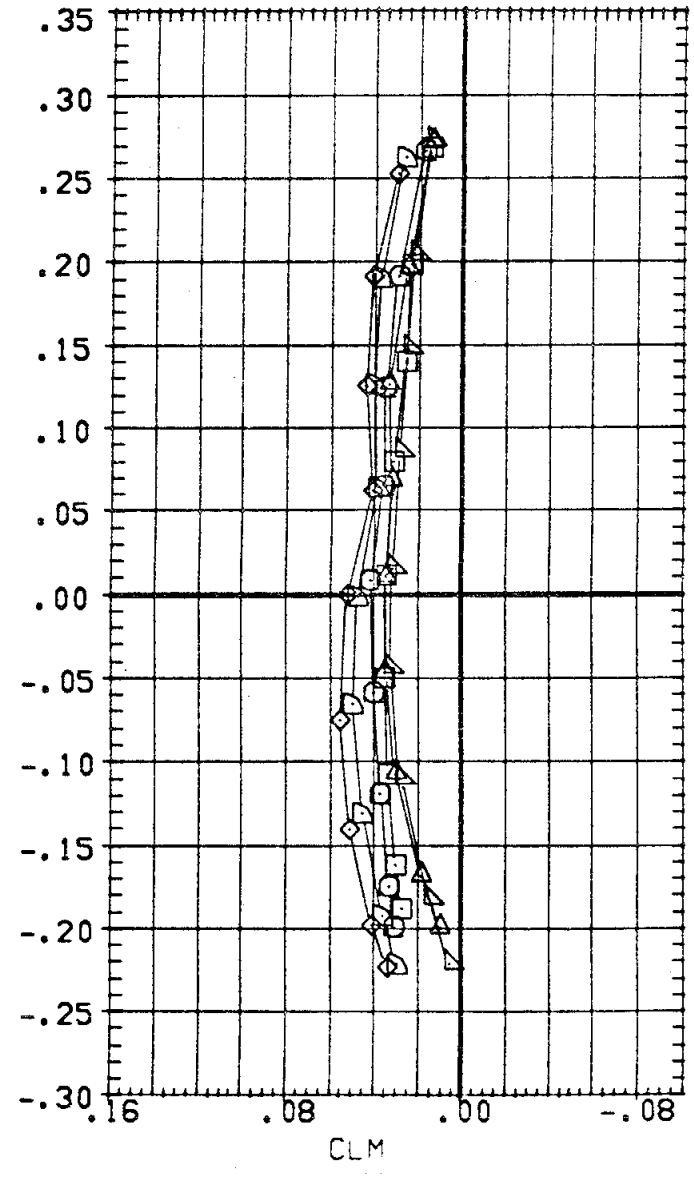
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2108)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(AP2109)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(AP2110)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(AP2111)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(AP2112)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(AP2113)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





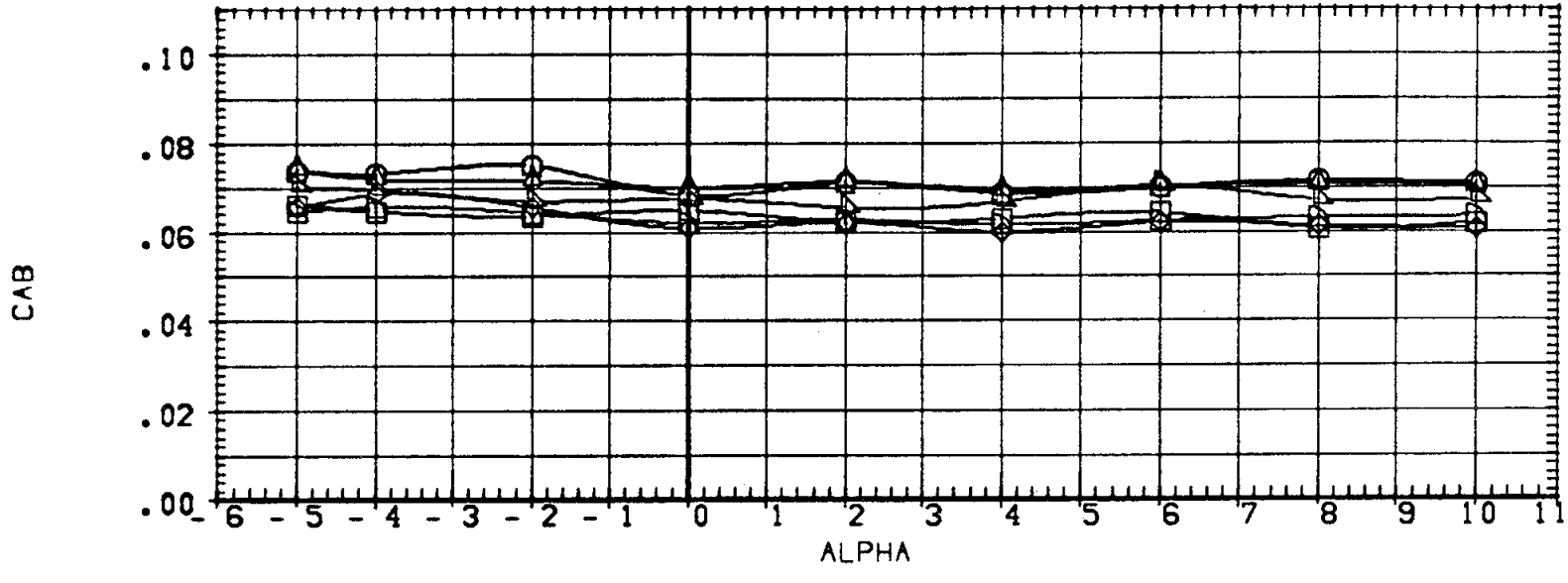


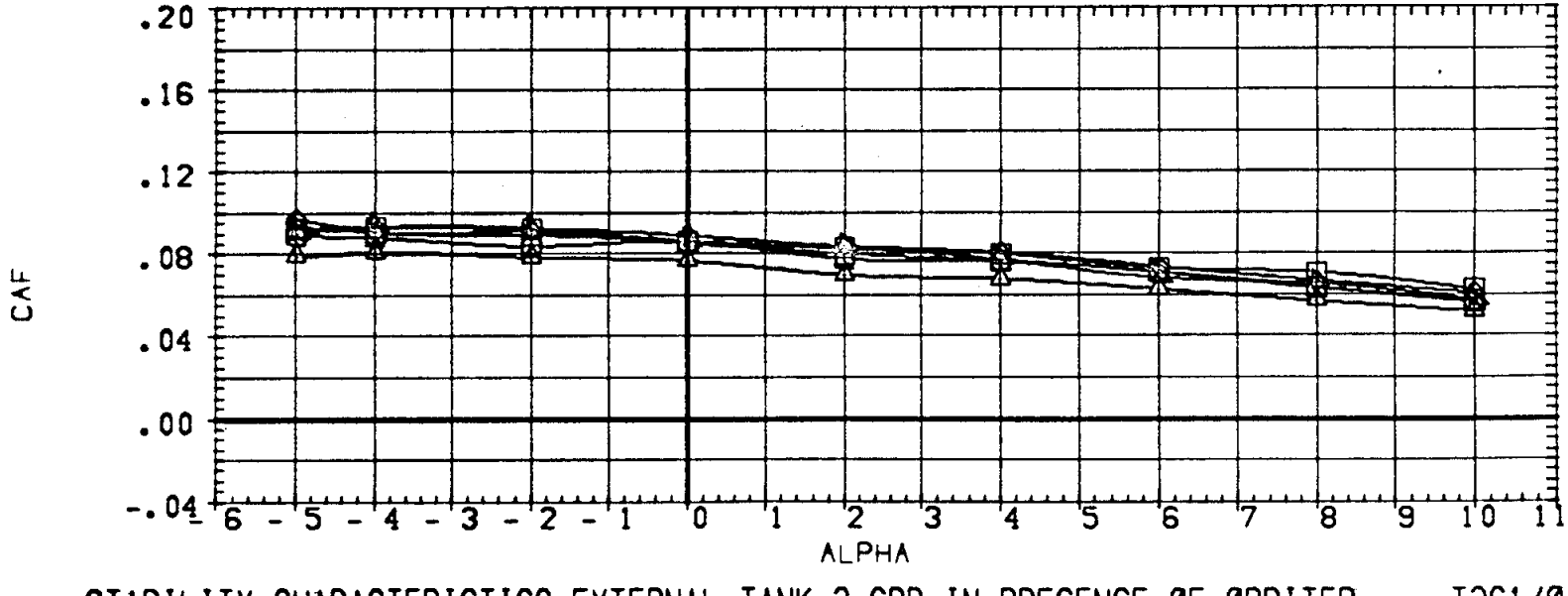
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(1)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)	○	HSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	.000	.120	10.000	.000
(A72109)	△	HSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.120	10.000	.000
(A72110)	◇	HSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	1.500	.120	10.000	.000
(A72111)	□	HSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	.000	.240	10.000	.000
(A72112)	▽	HSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.240	10.000	.000
(A72113)	⬠	HSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



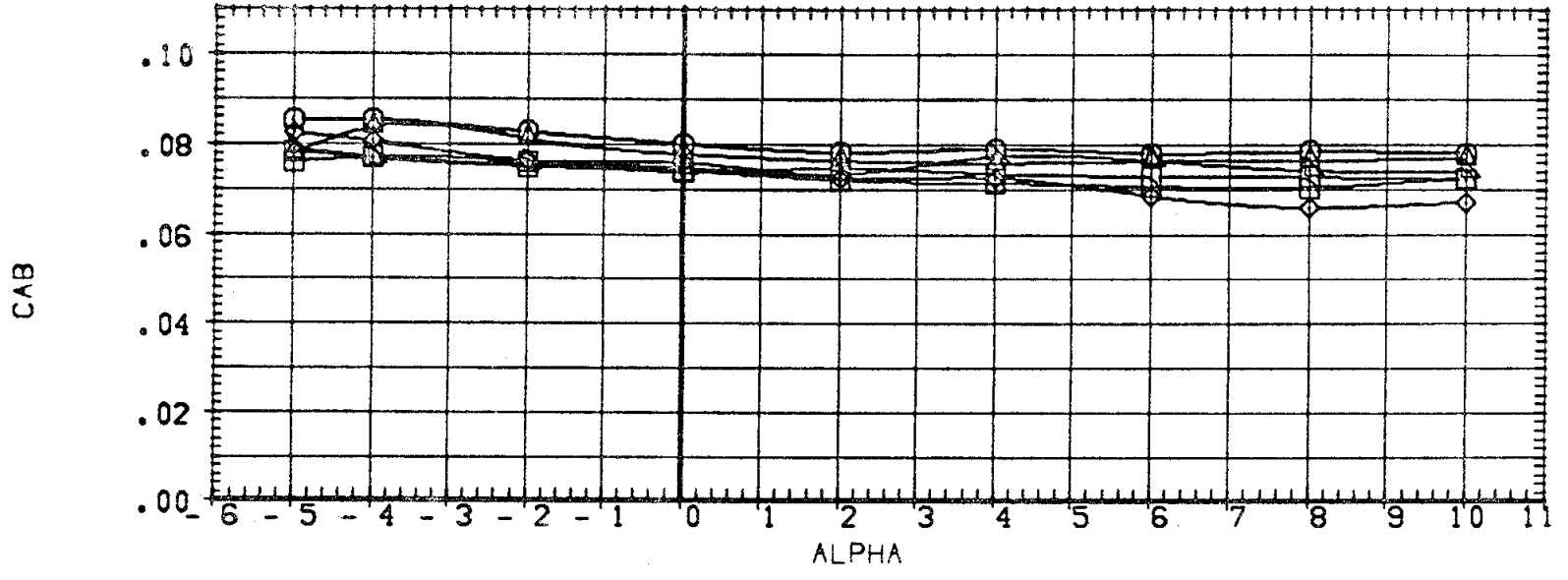


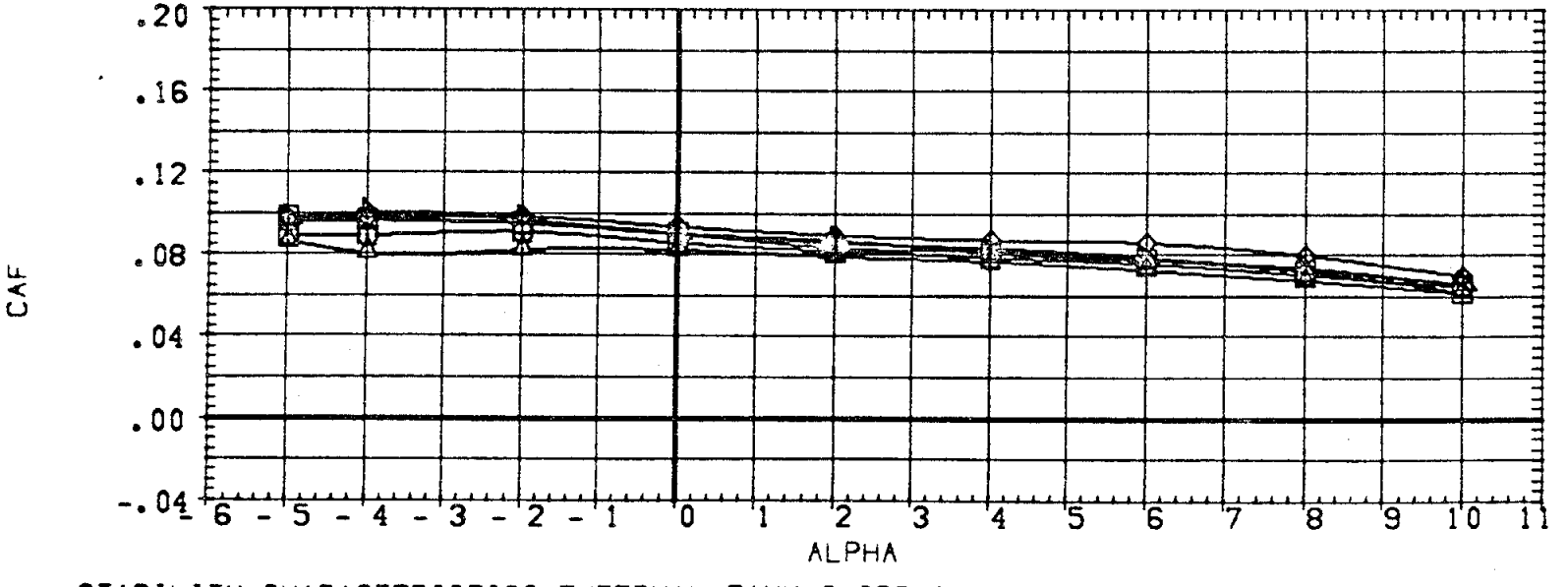
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)	◇	MSFC 545 (IA1) MOD ATP LV-(T5)(S1)/(O1)	.000	.120	10.000	.000
(A72109)	□	MSFC 545 (IA1) MOD ATP LV-(T5)(S1)/(O1)	-1.200	.120	10.000	.000
(A72110)	○	MSFC 545 (IA1) MOD ATP LV-(T5)(S1)/(O1)	1.500	.120	10.000	.000
(A72111)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	.000
(A72112)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	.000
(A72113)	☆	MSFC 545 (IA1) MOD ATP LV-(T5)(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



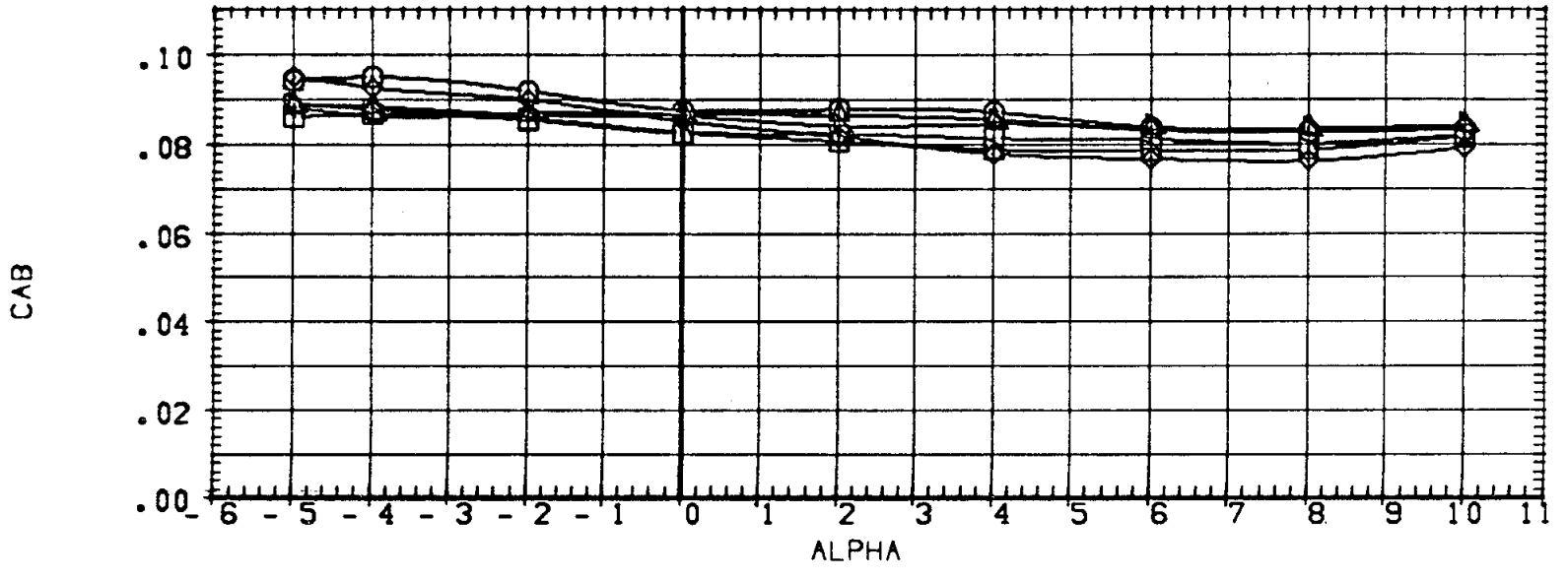


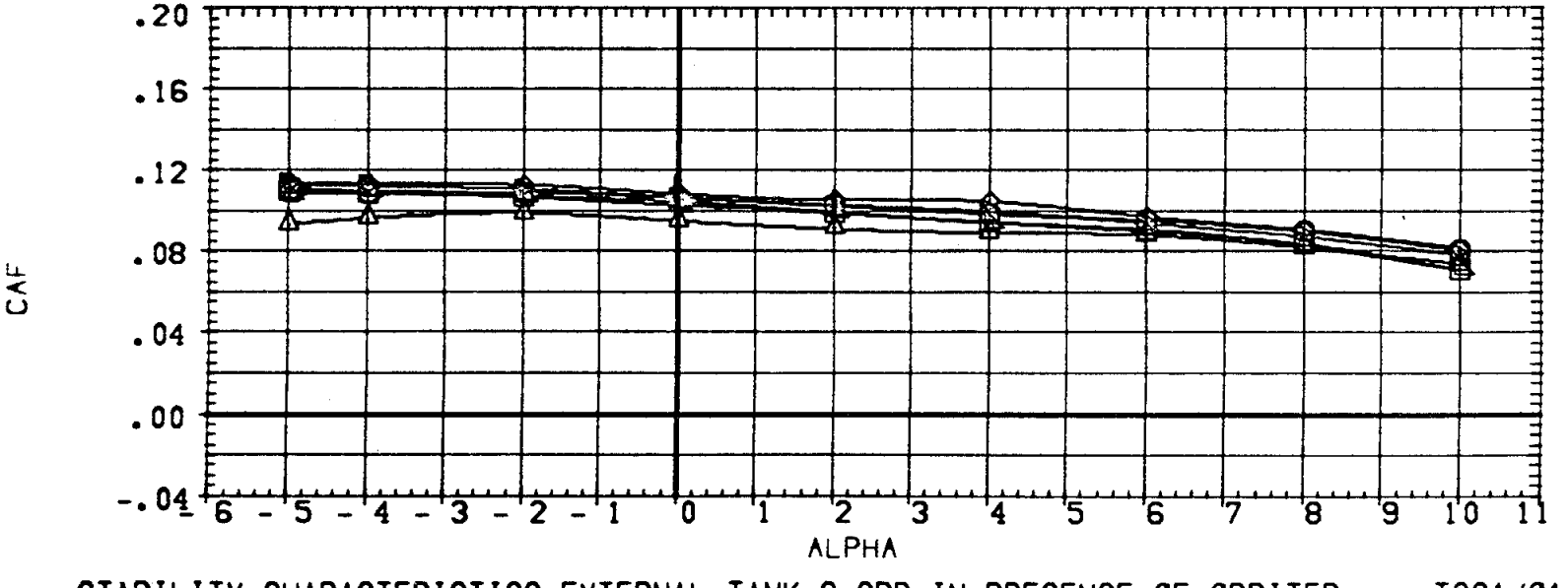
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72109)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	.000
(A72110)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(A72111)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	.000
(A72112)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	.000
(A72113)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



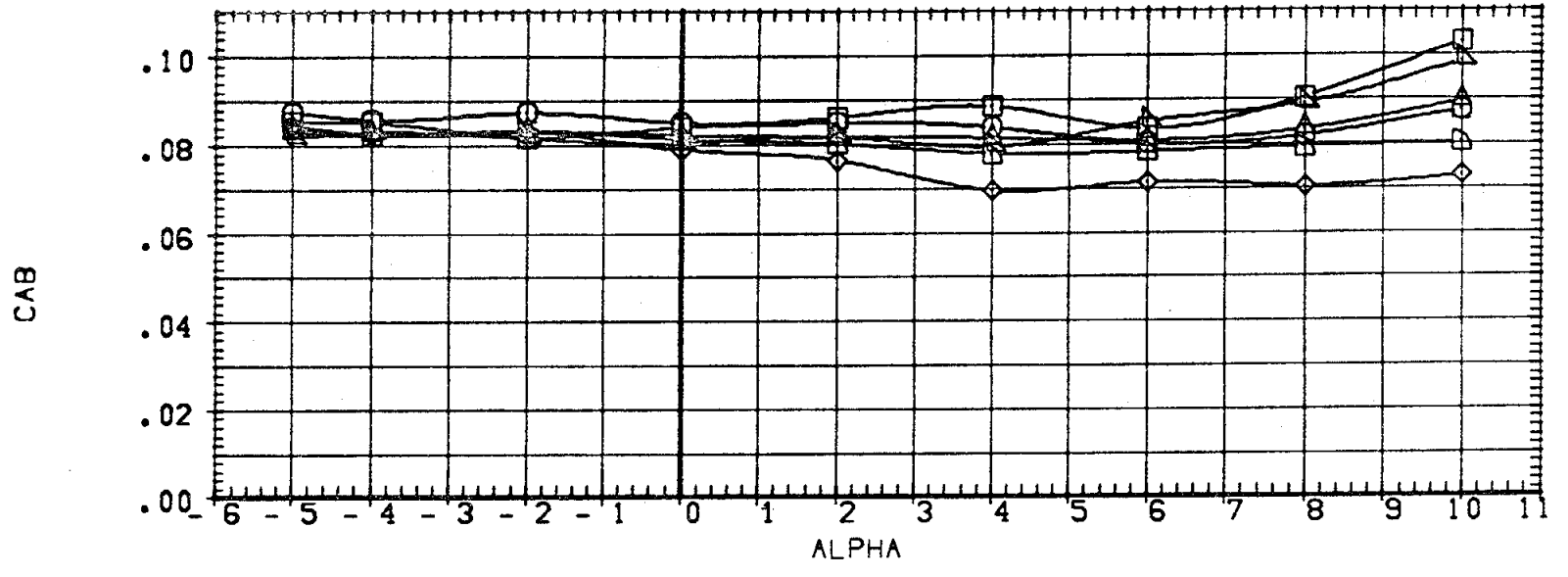


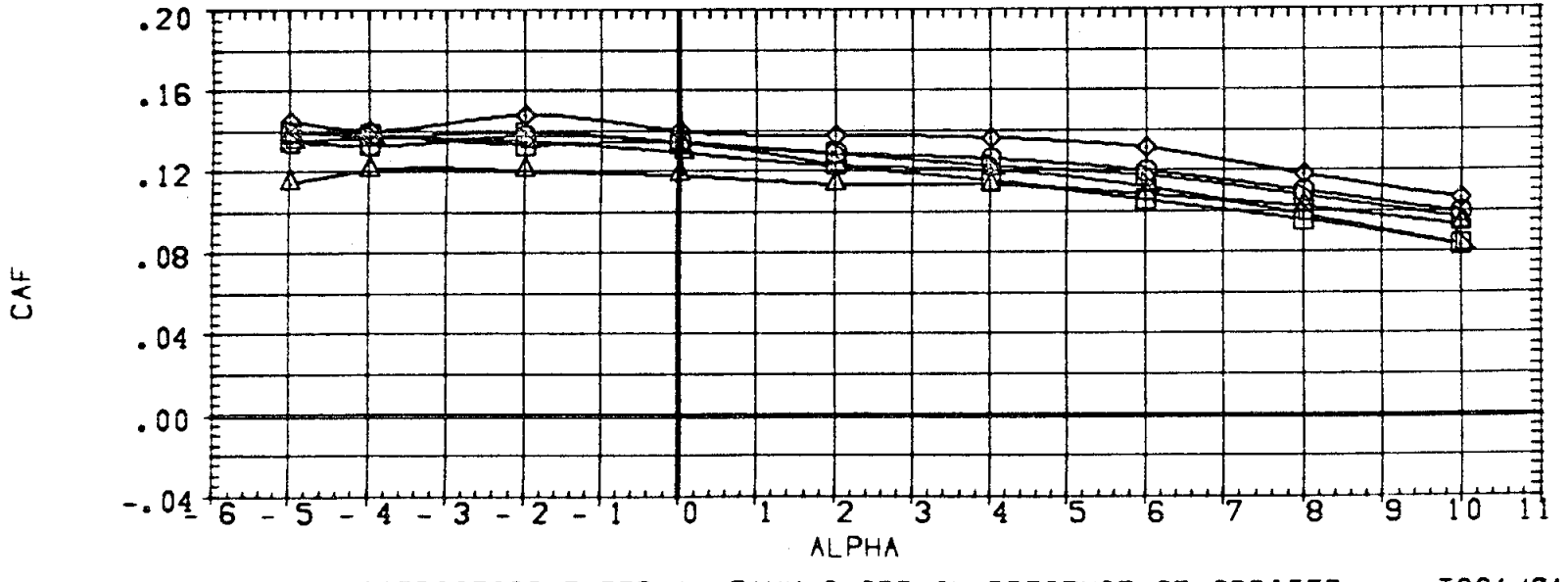
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	.000	.120	10.000	.000
(A72109)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.120	10.000	.000
(A72110)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	1.500	.120	10.000	.000
(A72111)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	.000	.240	10.000	.000
(A72112)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.240	10.000	.000
(A72113)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



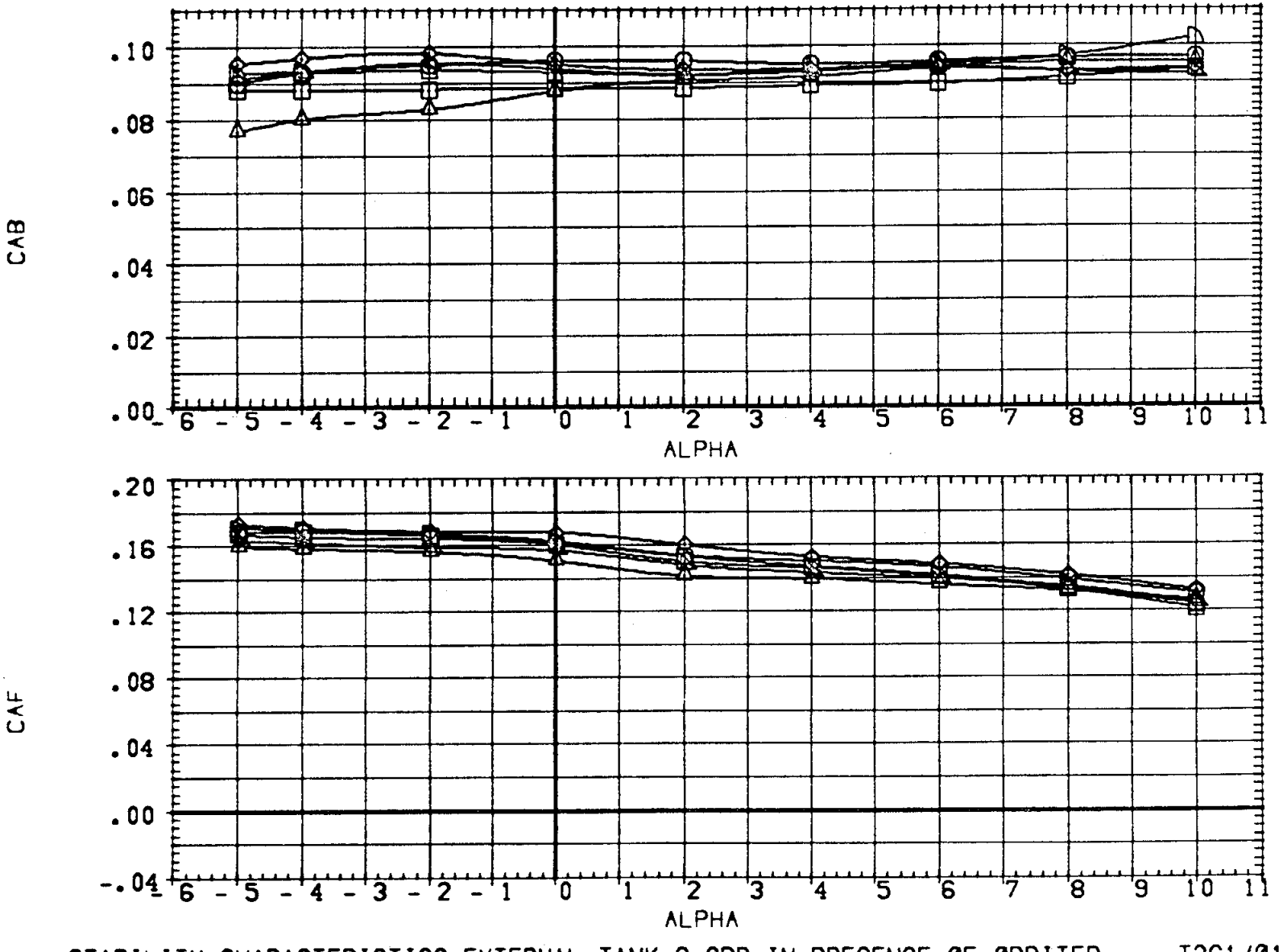


STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(D)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	.000
(A72110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(A72111)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	.000
(A72112)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	.000
(A72113)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

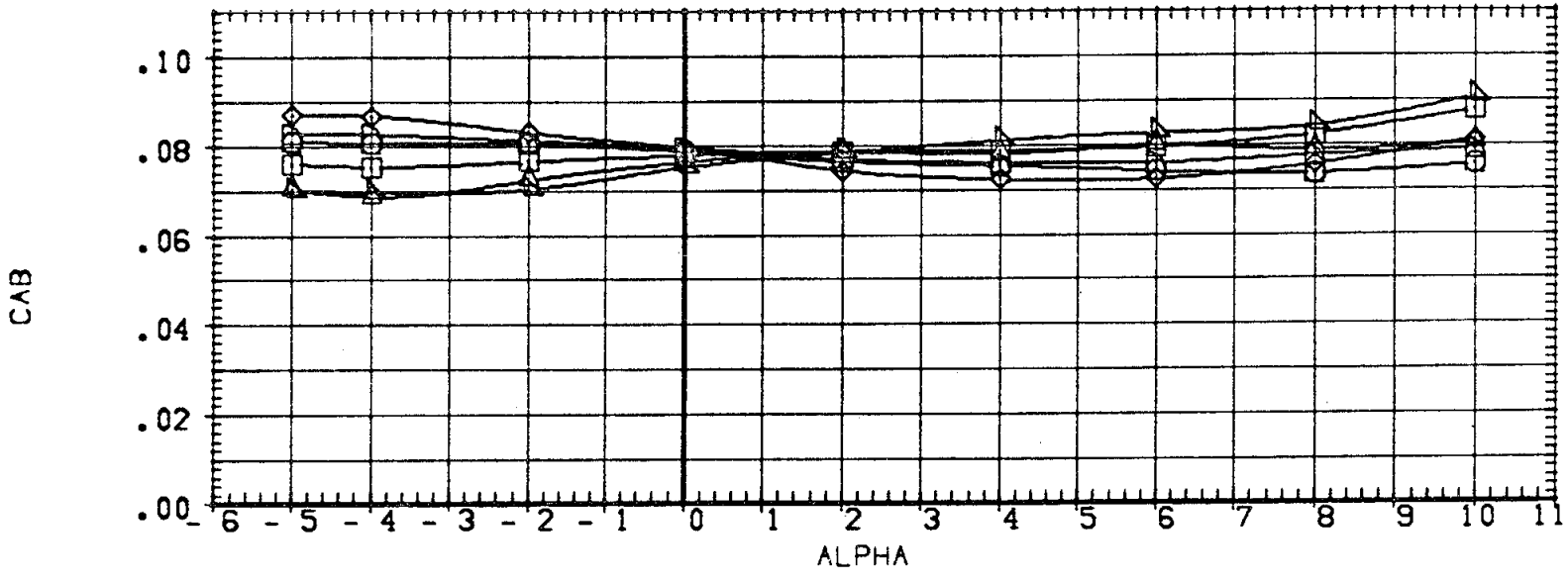


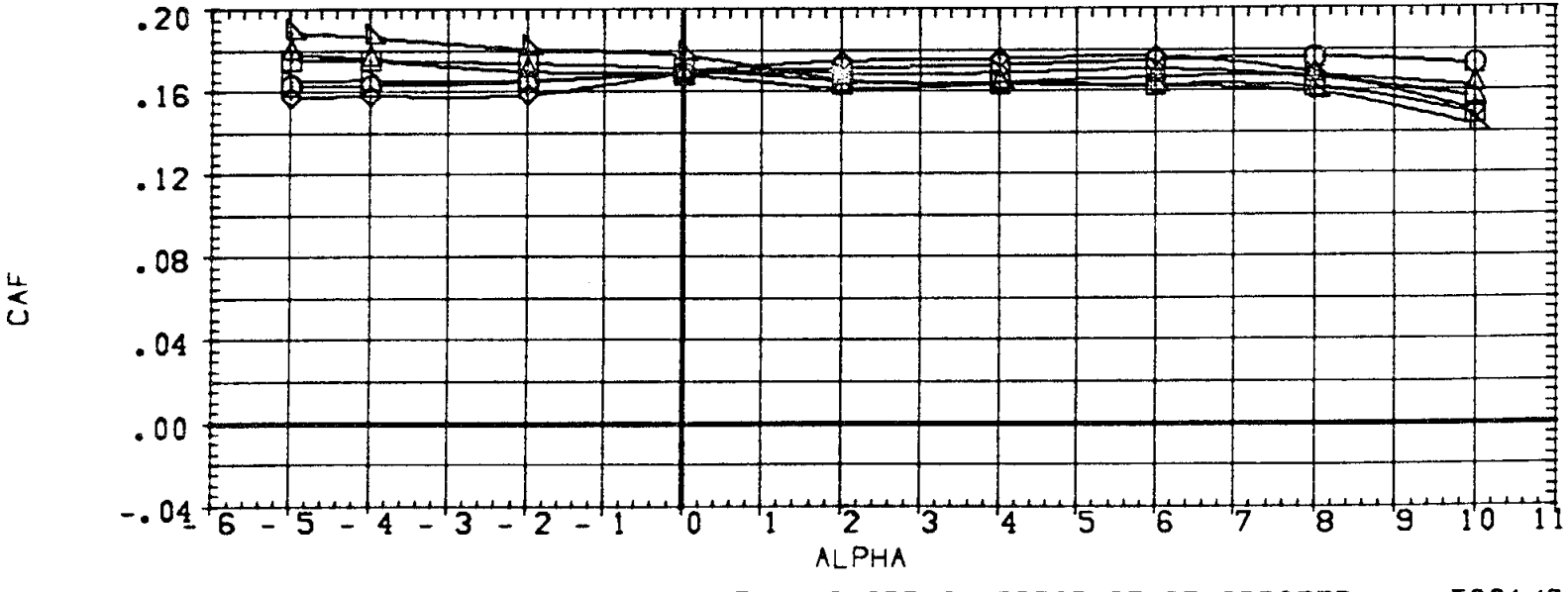
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER. T3S1/01

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	.000	.120	10.000	.000
(A72109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.120	10.000	.000
(A72110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	1.500	.120	10.000	.000
(A72111)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	.000	.240	10.000	.000
(A72112)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.240	10.000	.000
(A72113)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1526.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



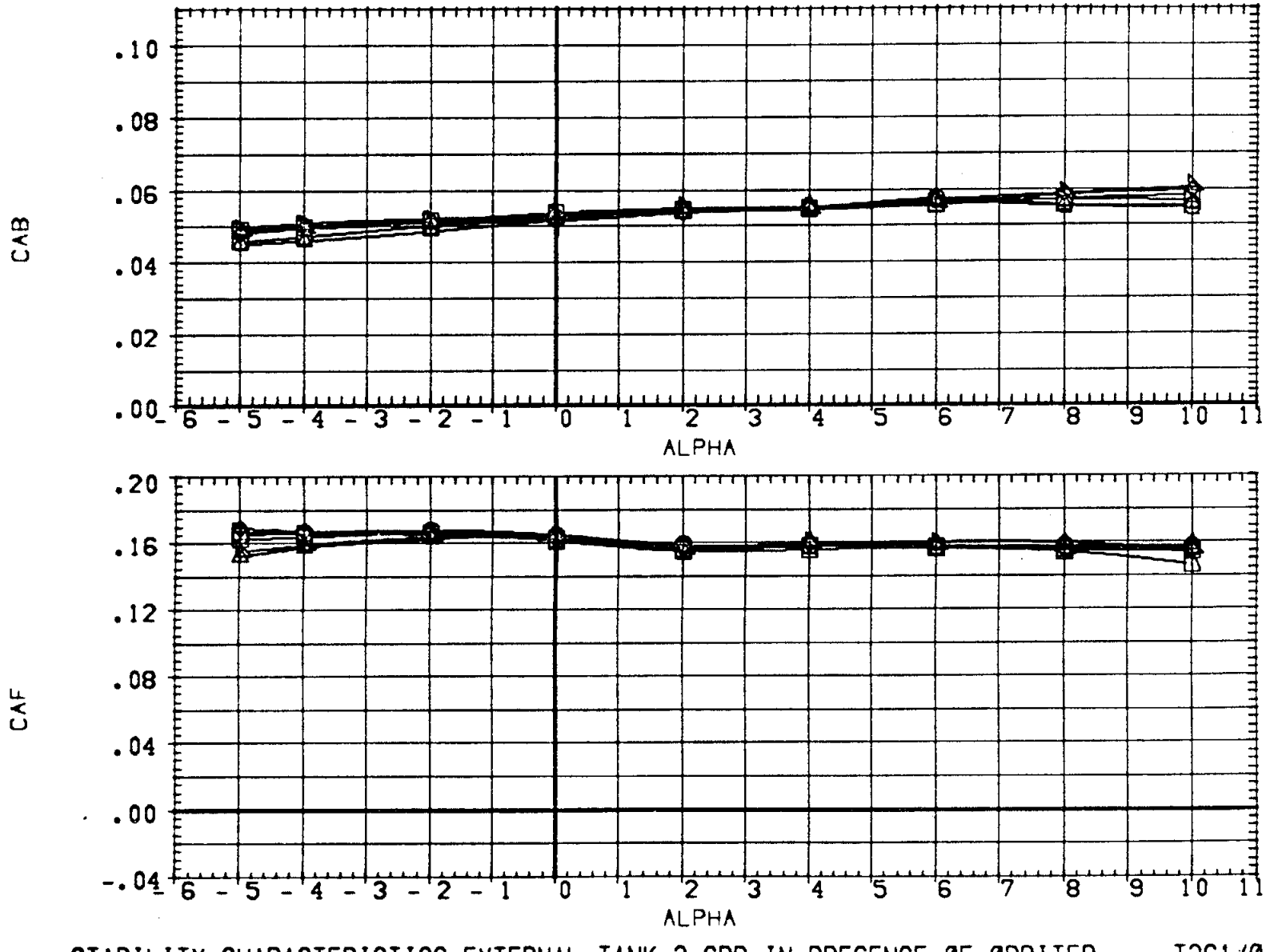


STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	.000
(A72110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(A72111)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	.000
(A72112)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	.000
(A72113)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

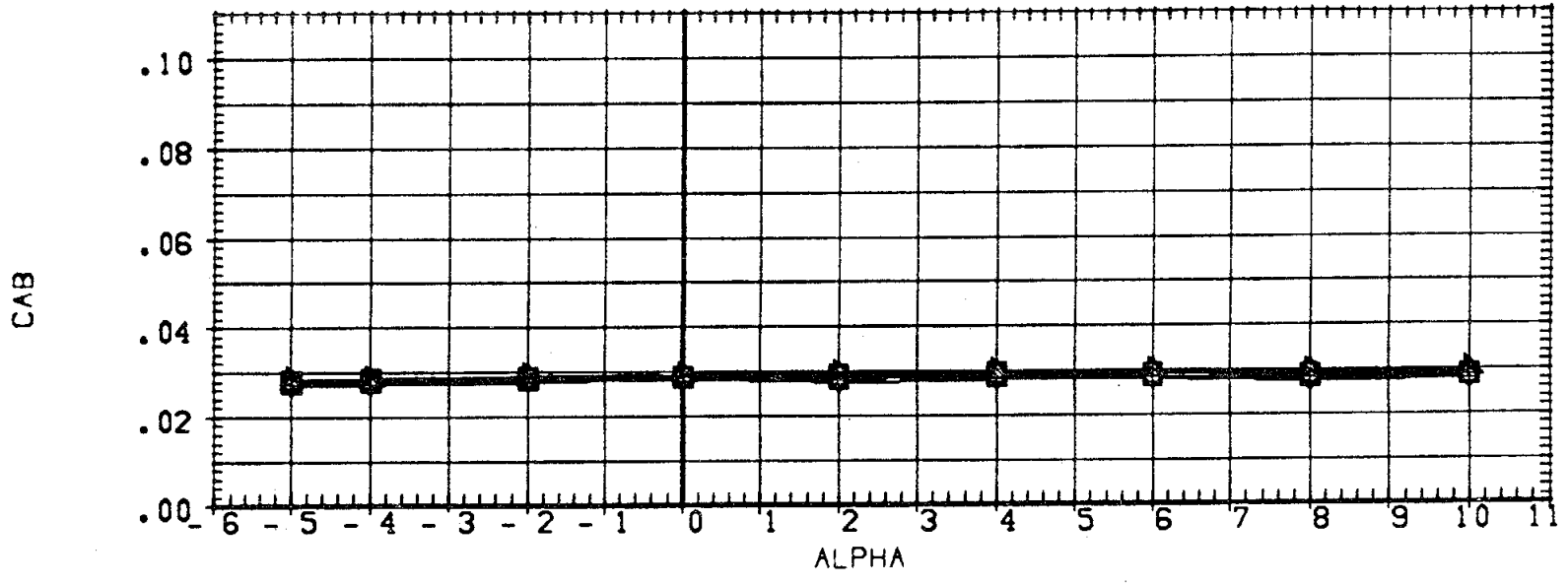


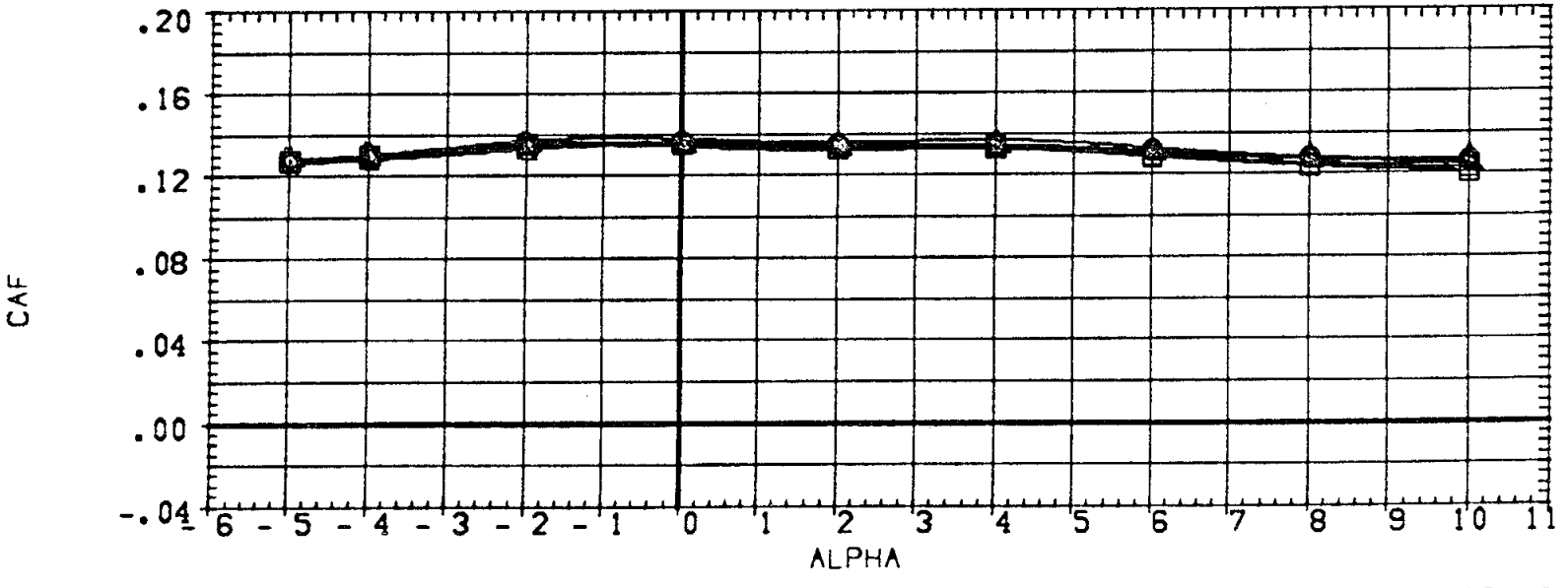
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(G)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	.000
(A72110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(A72111)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	.000
(A72112)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	.000
(A72113)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



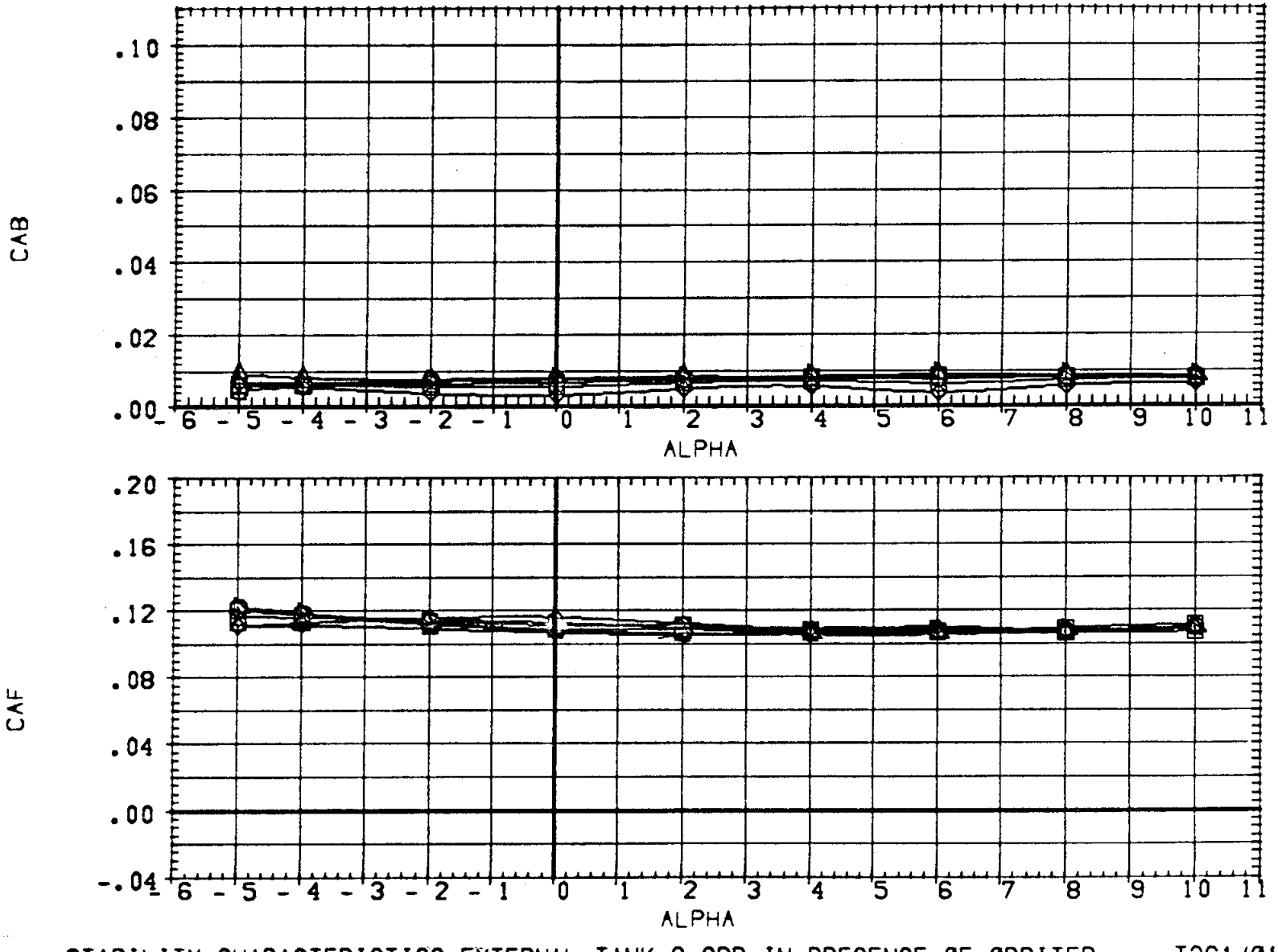


STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72106)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	.000	.120	10.000	.000
(A72109)	□	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.120	10.000	.000
(A72110)	△	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	1.500	.120	10.000	.000
(A72111)	○	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	.000	.240	10.000	.000
(A72112)	▽	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.240	10.000	.000
(A72113)	☆	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

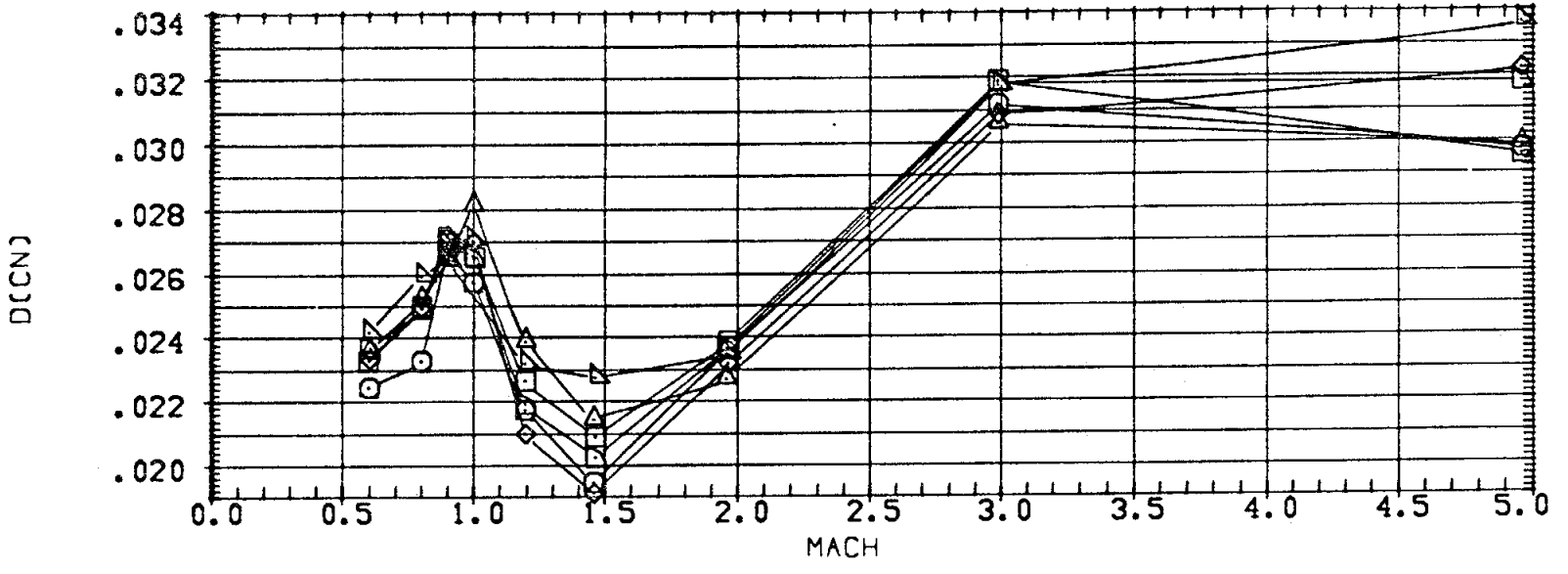


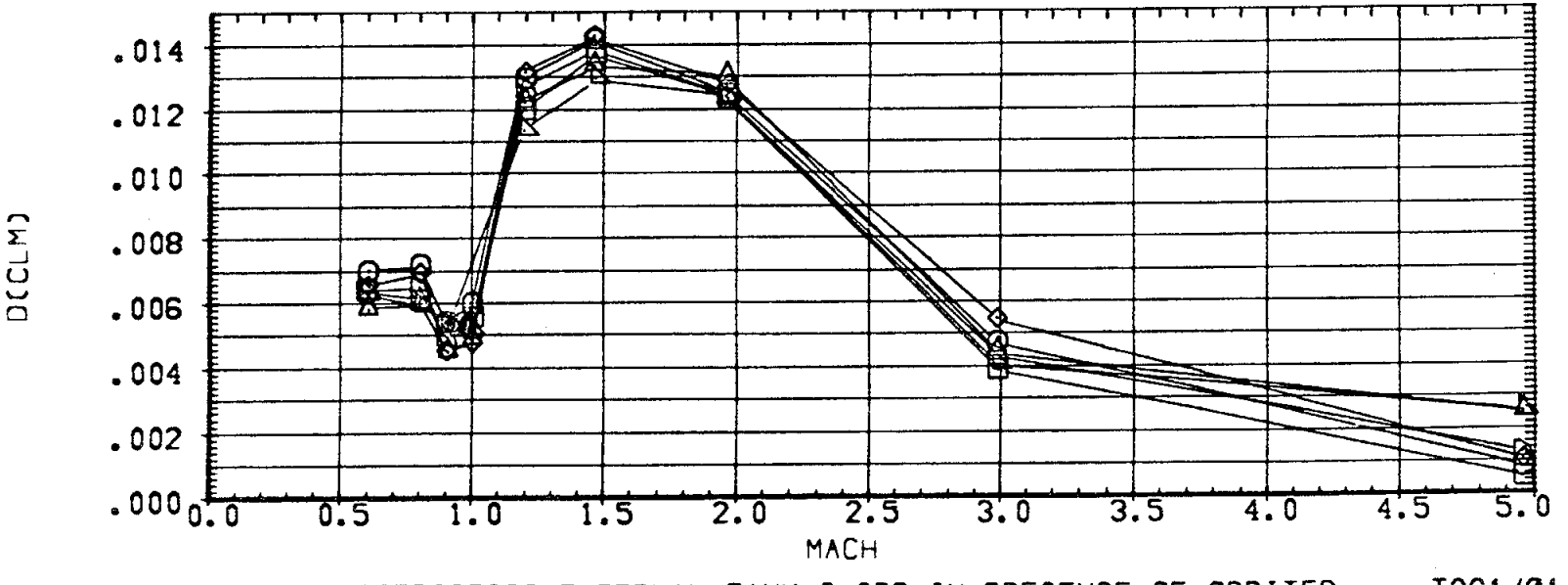
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(1)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(872109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	.000
(872110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(872111)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	.000
(872112)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	.000
(872113)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

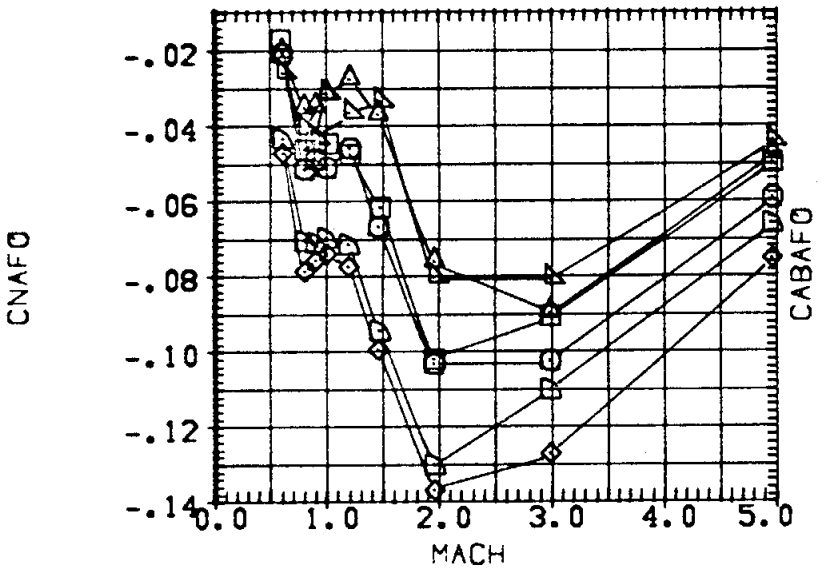


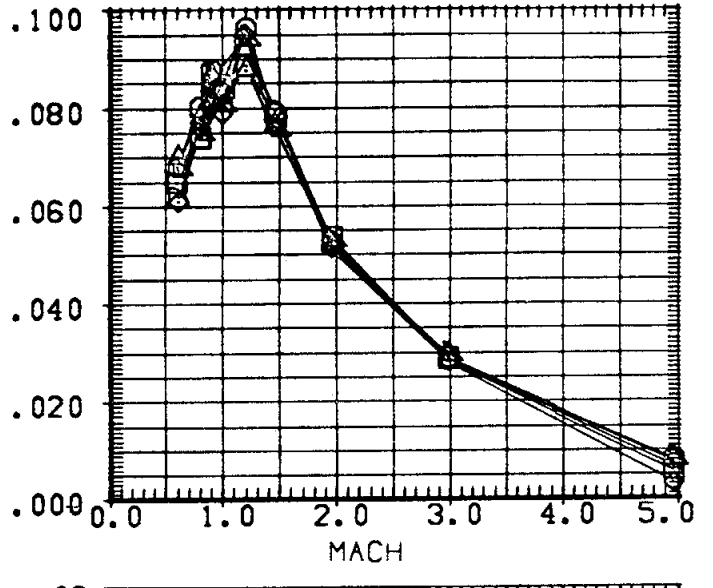


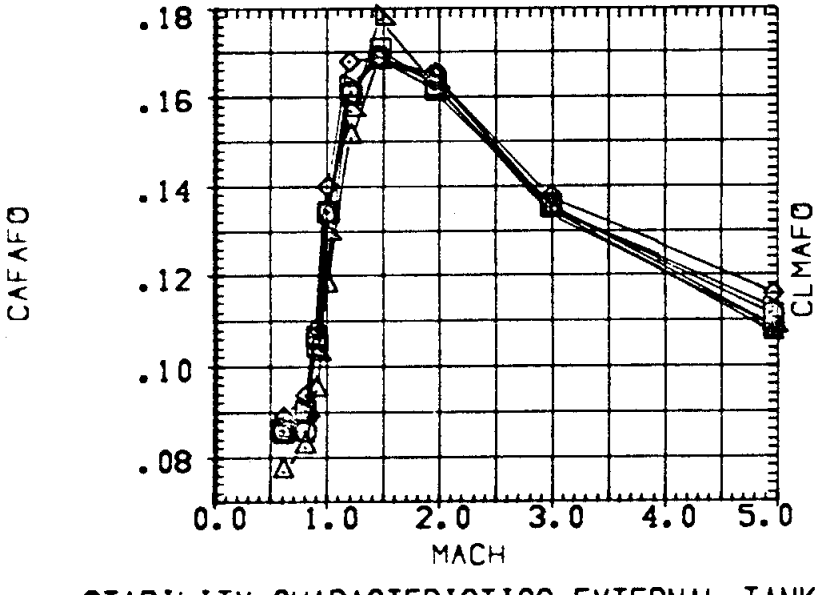
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

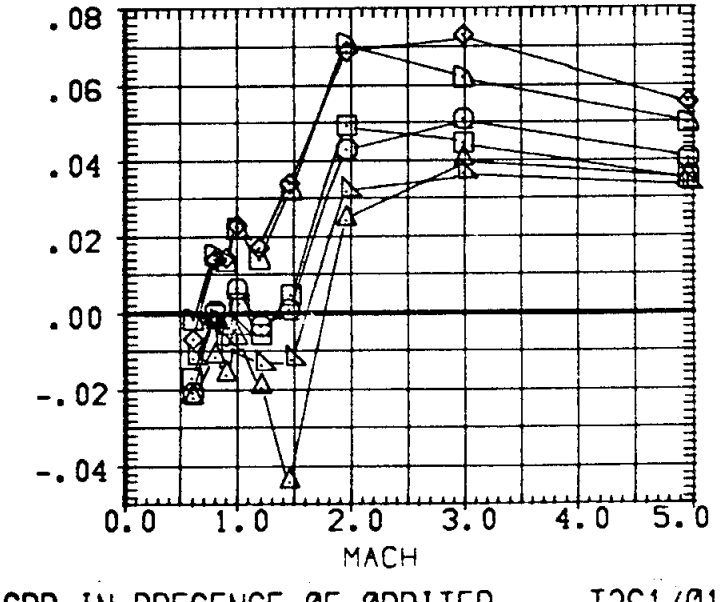
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(872108)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(872109)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(872110)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(872111)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(872112)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(872113)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB	REFERENCE INFORMATION		
.000	.120	10.000	.000	SREF	3220.0000	SQ.FT.
-1.200	.120	10.000	.000	LREF	1328.0000	IN.
1.500	.120	10.000	.000	BREF	1328.0000	IN.
.000	.240	10.000	.000	XMRP	.0000	
-1.200	.240	10.000	.000	YMRP	.0000	
1.500	.240	10.000	.000	ZMRP	.0000	
				SCALE	100.0000	PERCNT







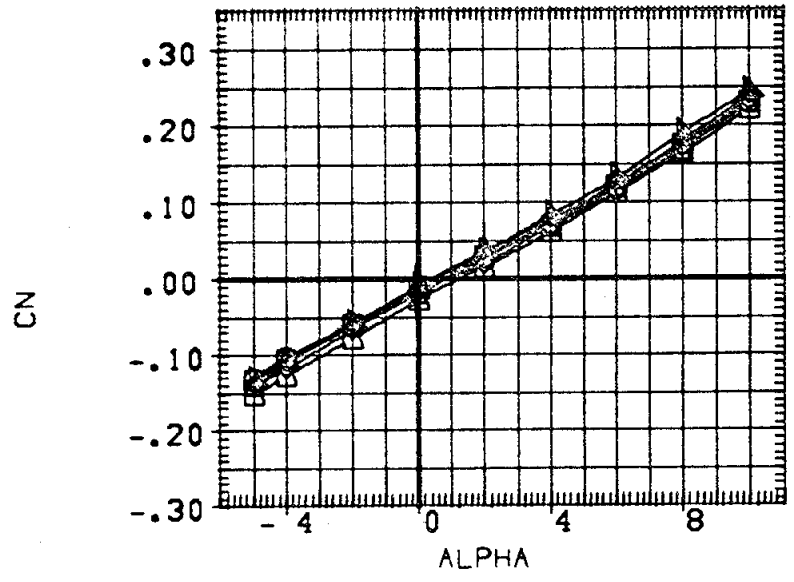


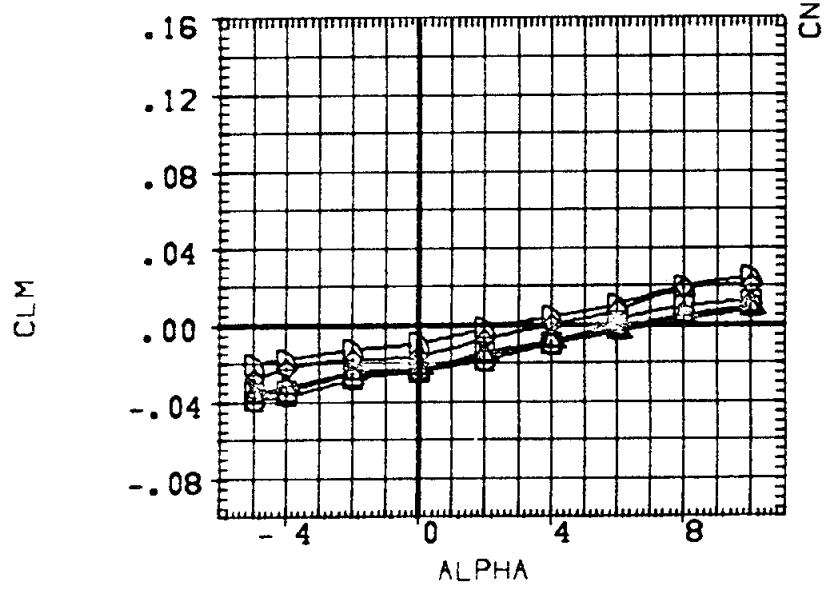
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

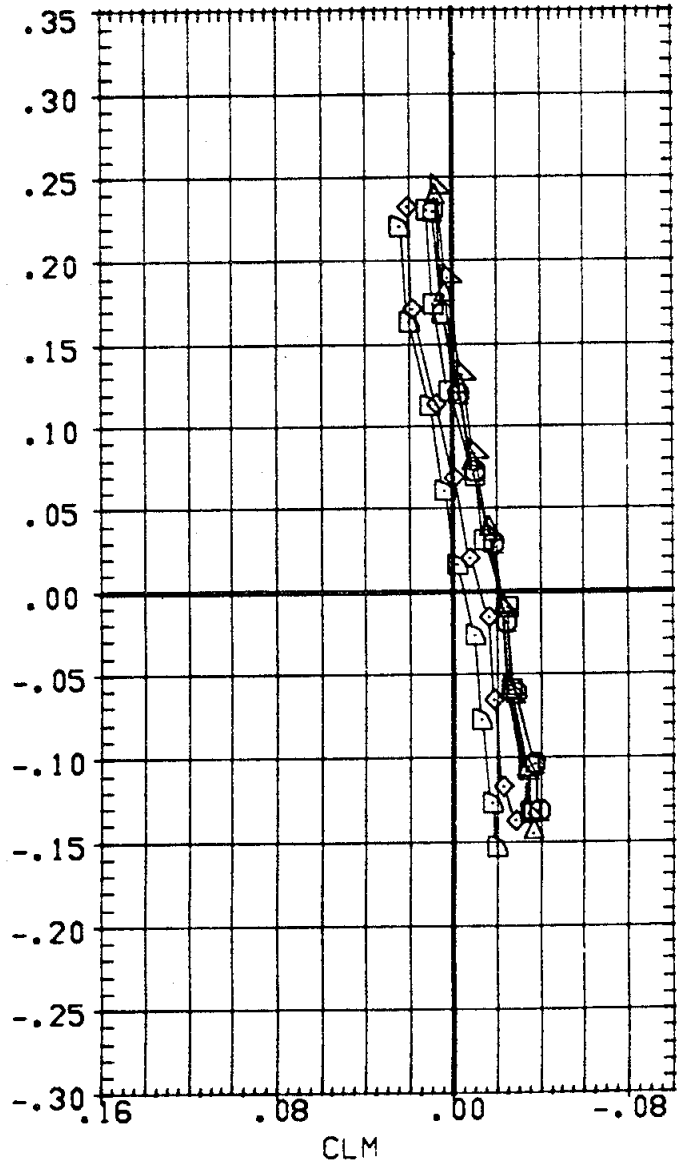
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72122)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72123)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72124)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72125)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72126)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72127)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







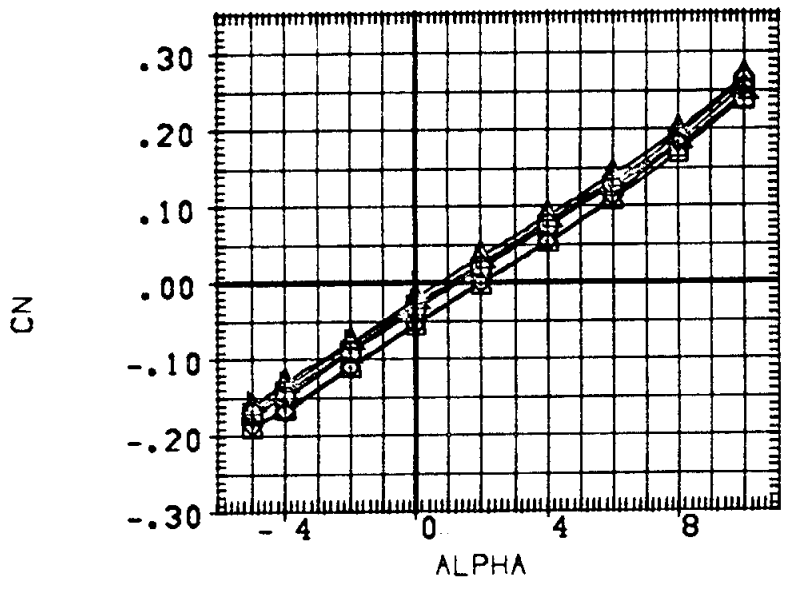
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

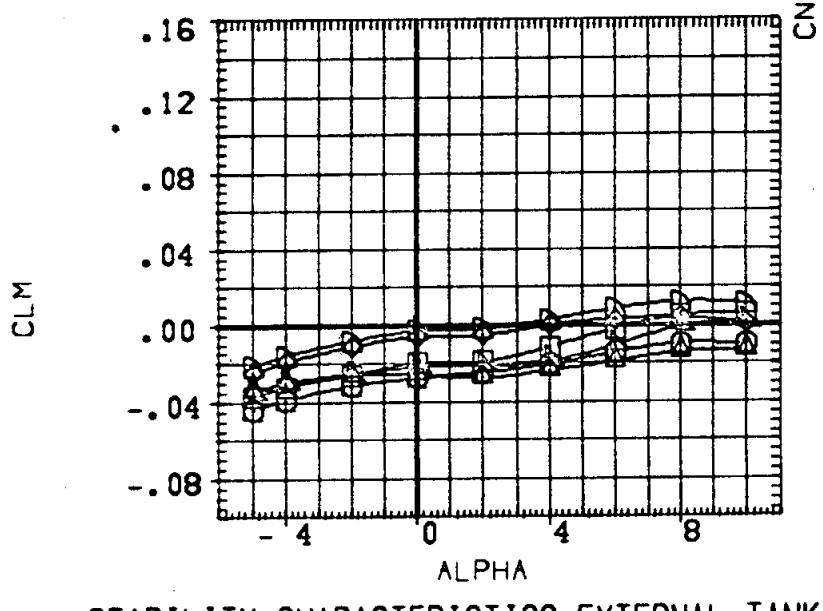
(A)MACH = .60

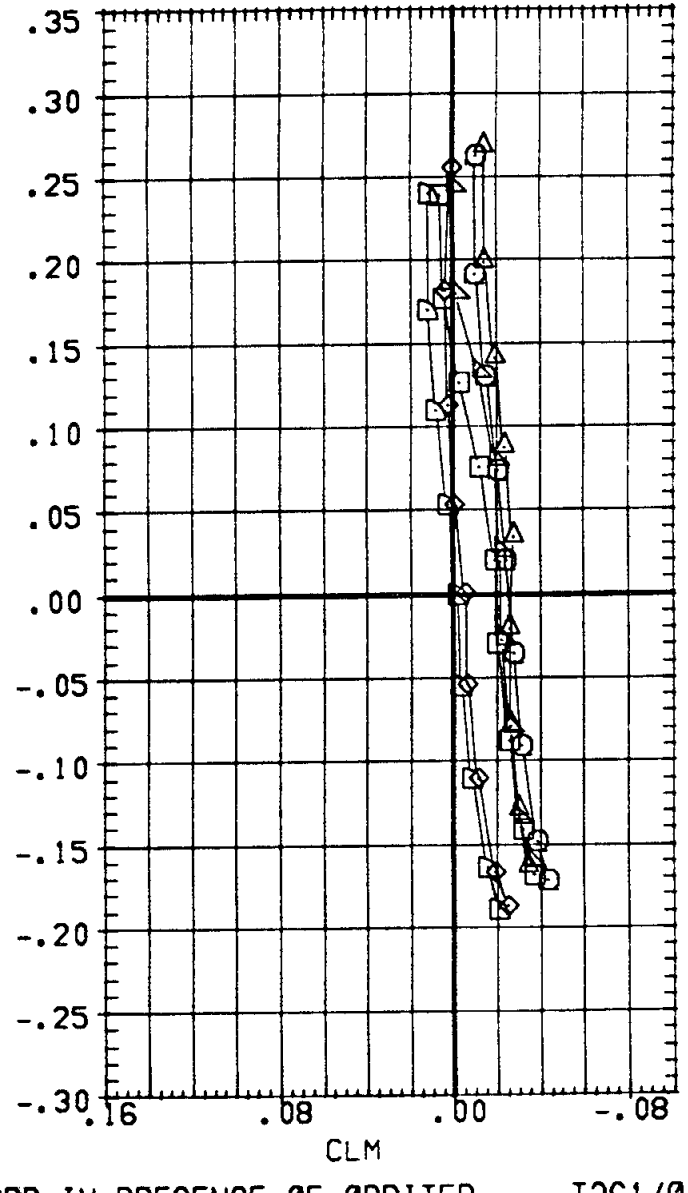
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72122)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72123)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72125)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72126)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72127)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







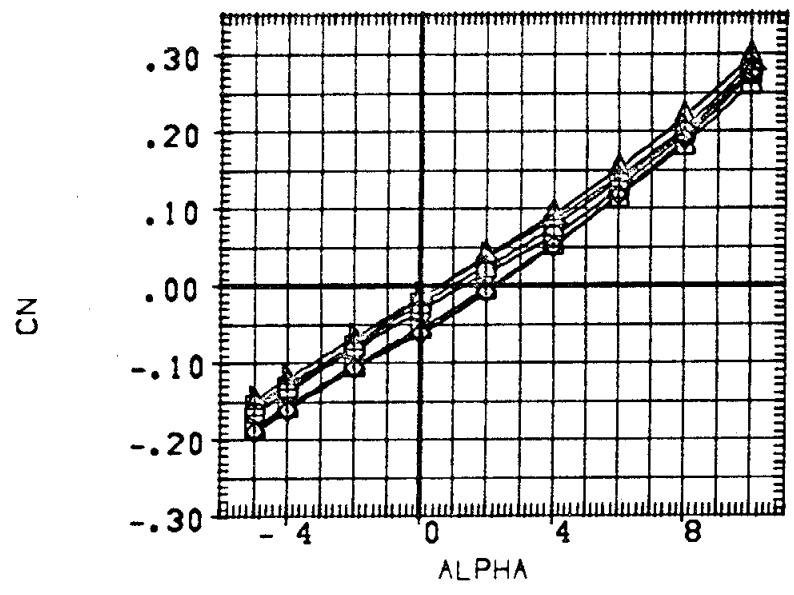
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

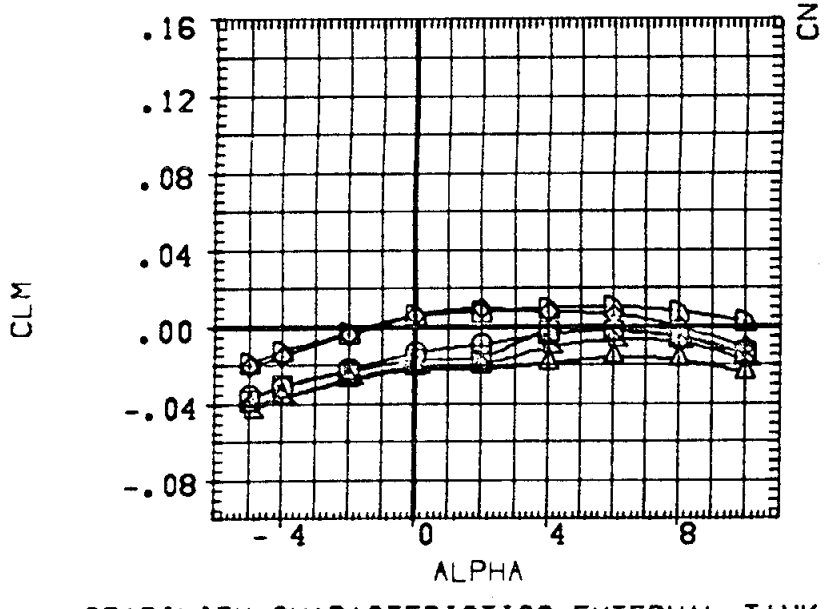
(B)MACH = .90

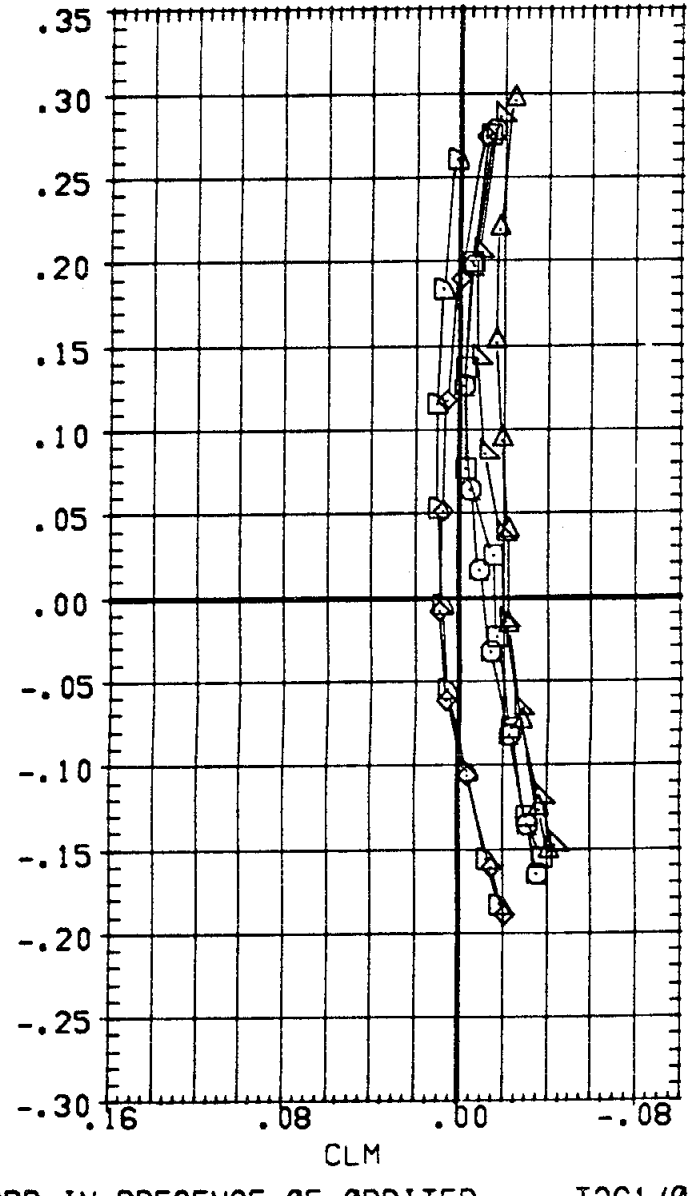
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72122)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72123)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72124)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72125)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72126)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)
(A72127)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







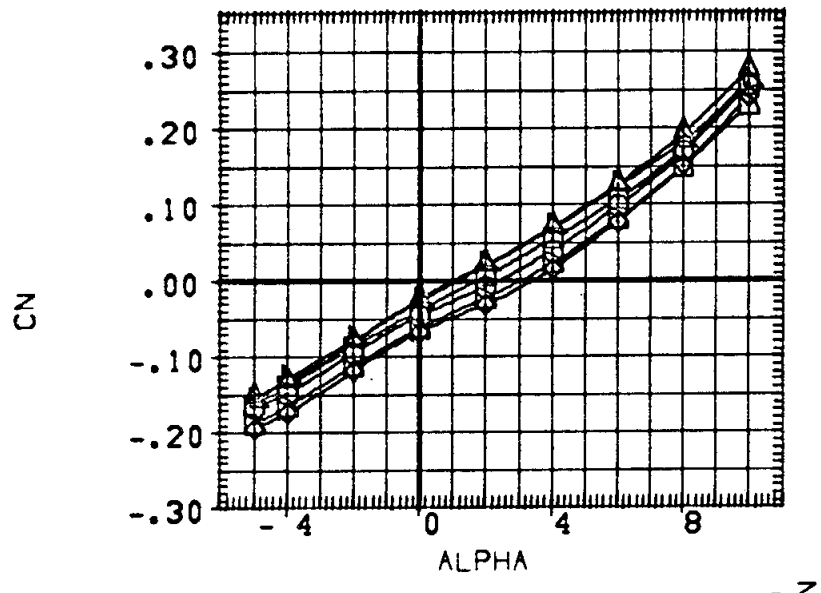
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

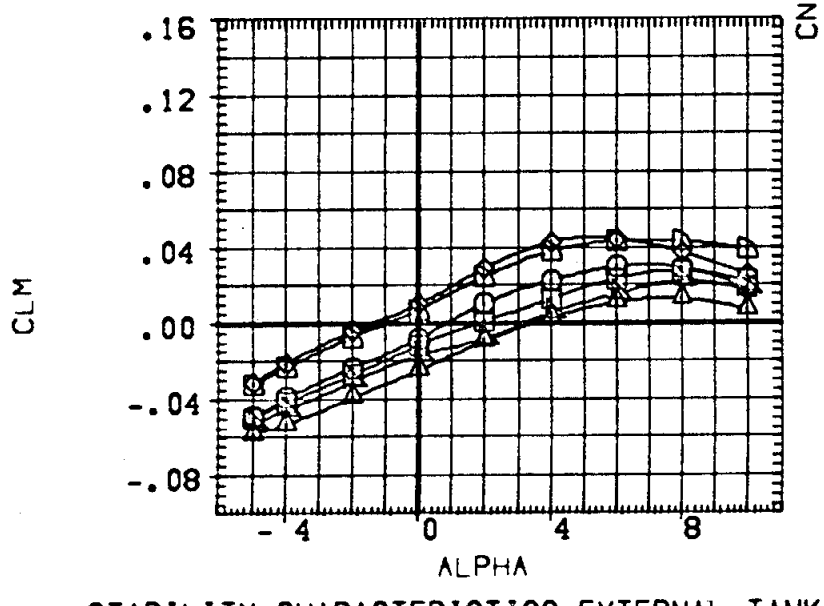
(C)MACH = 1.00

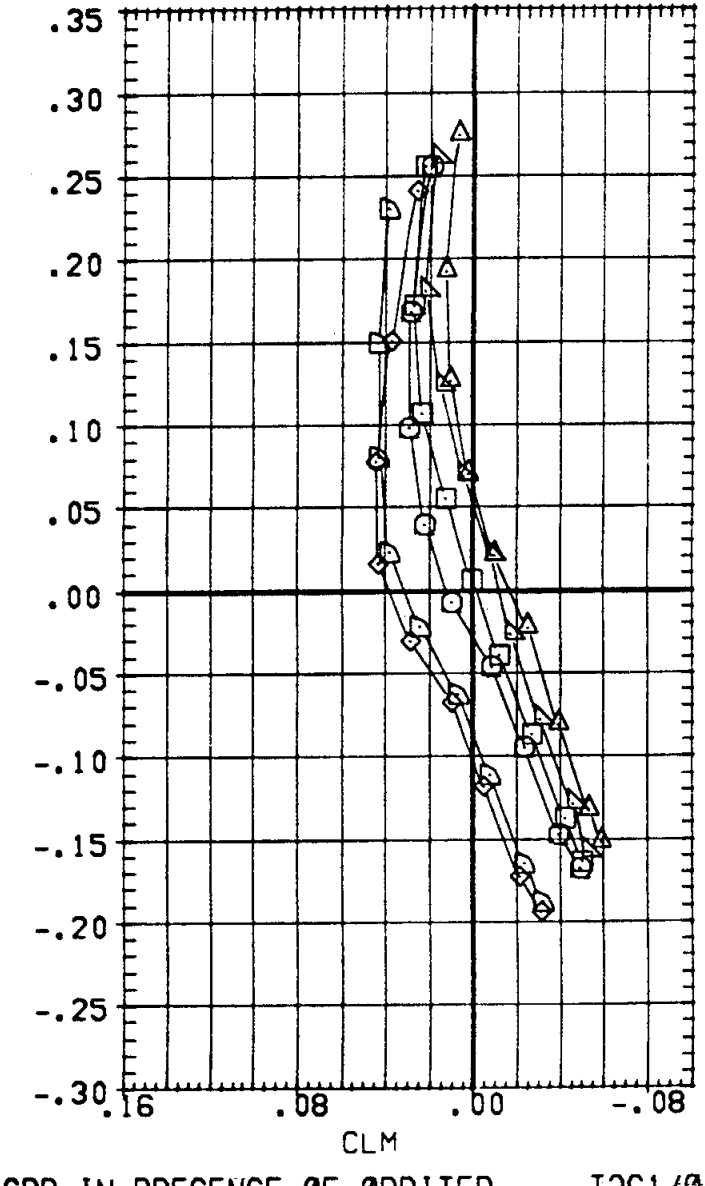
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72122)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72123)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72125)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72126)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72127)	⊳	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







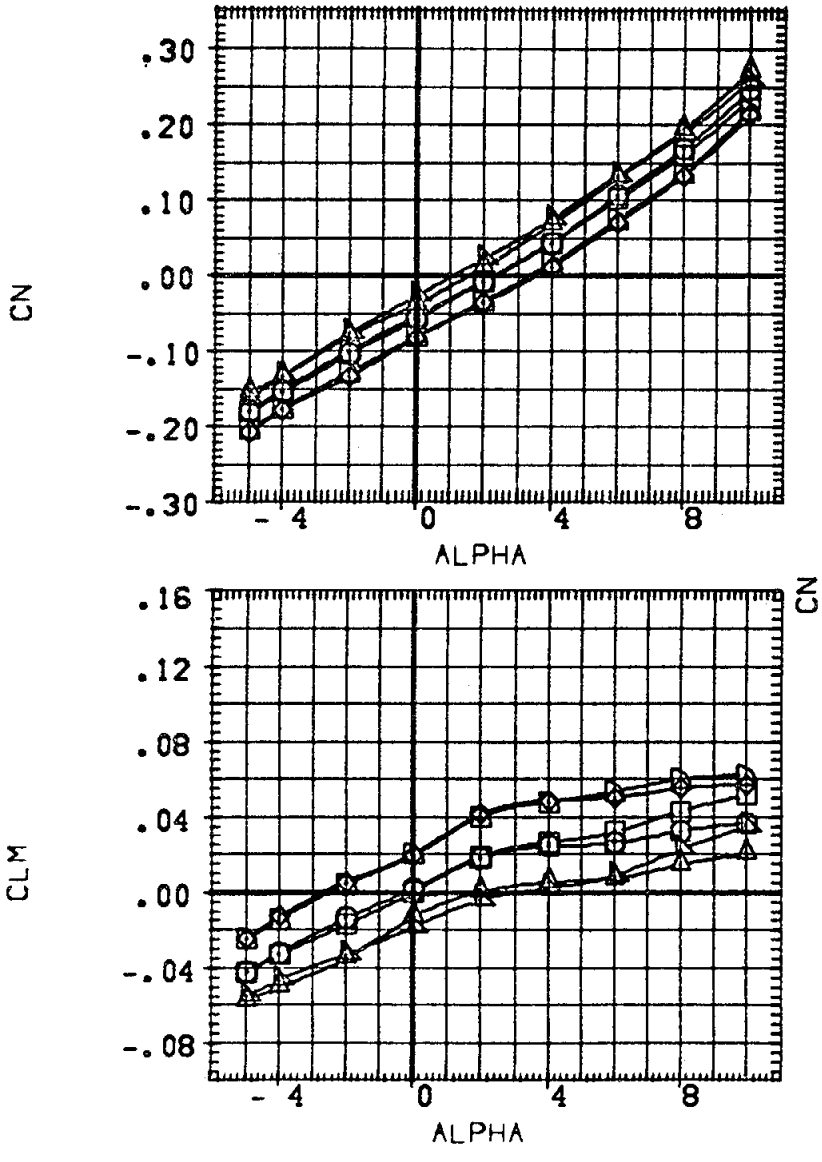
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

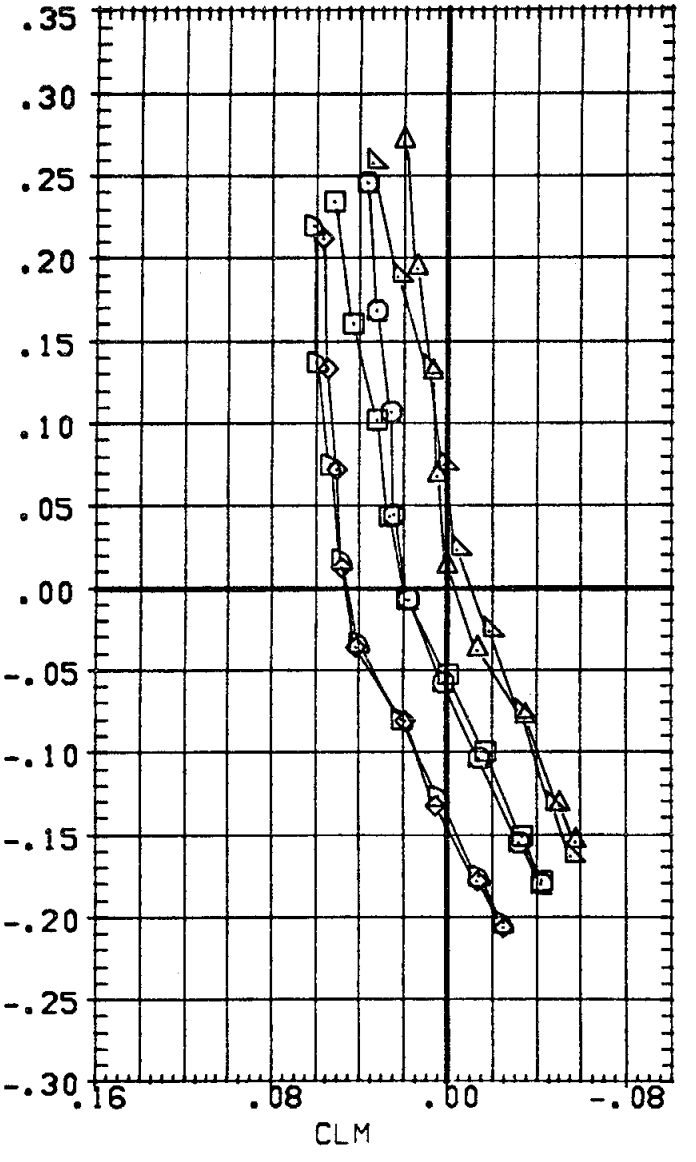
(□)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72122)	○	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72123)	⊠	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72124)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72125)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72126)	□	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72127)	▽	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





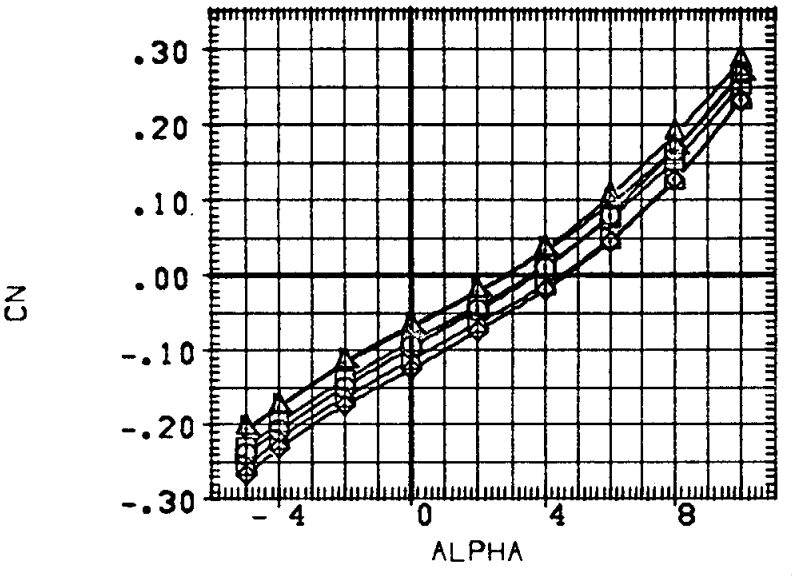
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

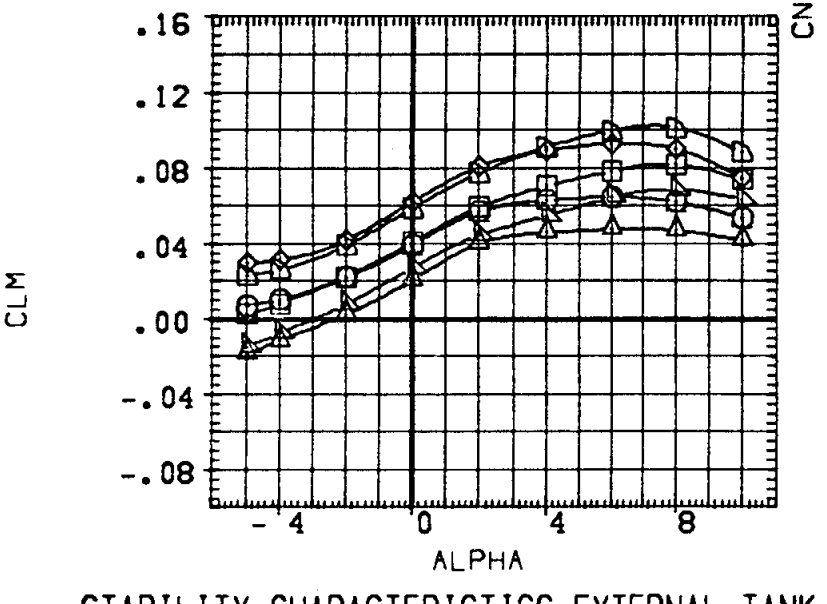
(E)MACH = 1.46

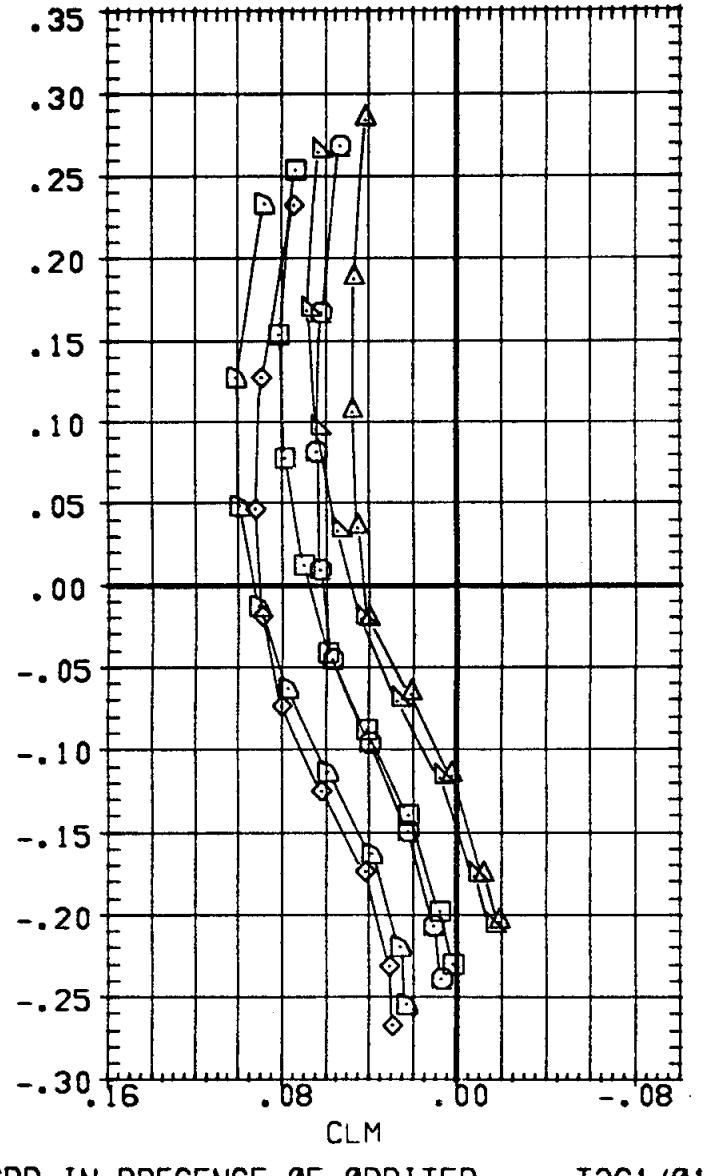
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72122)	○	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72123)	□	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72124)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72125)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72126)	▽	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72127)	▷	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





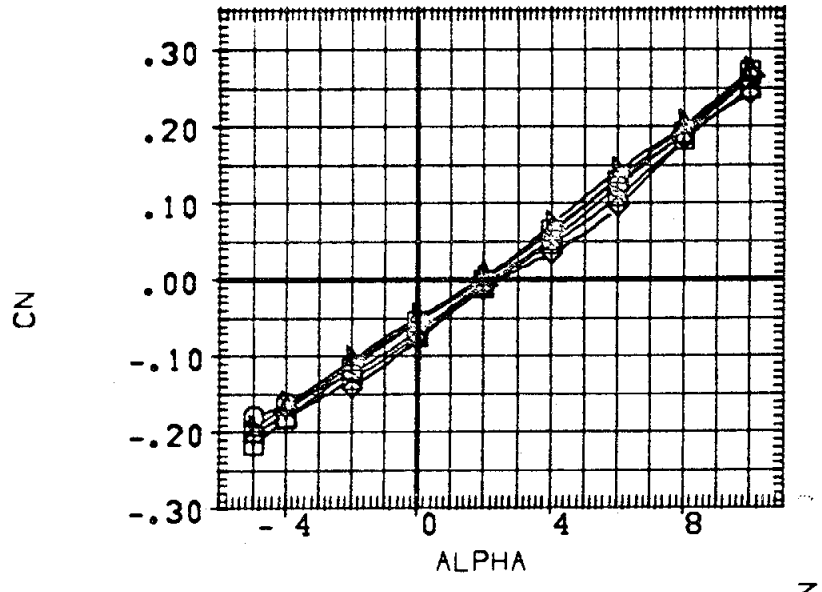


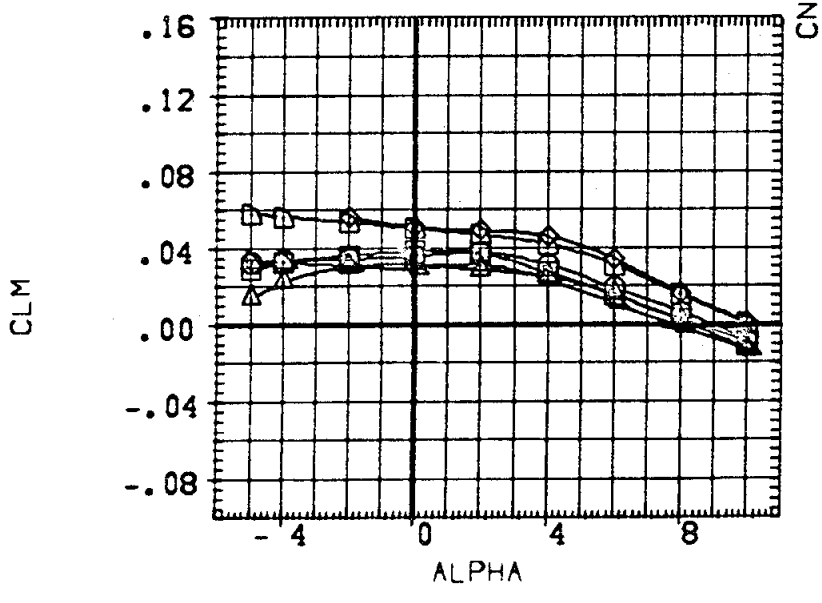
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

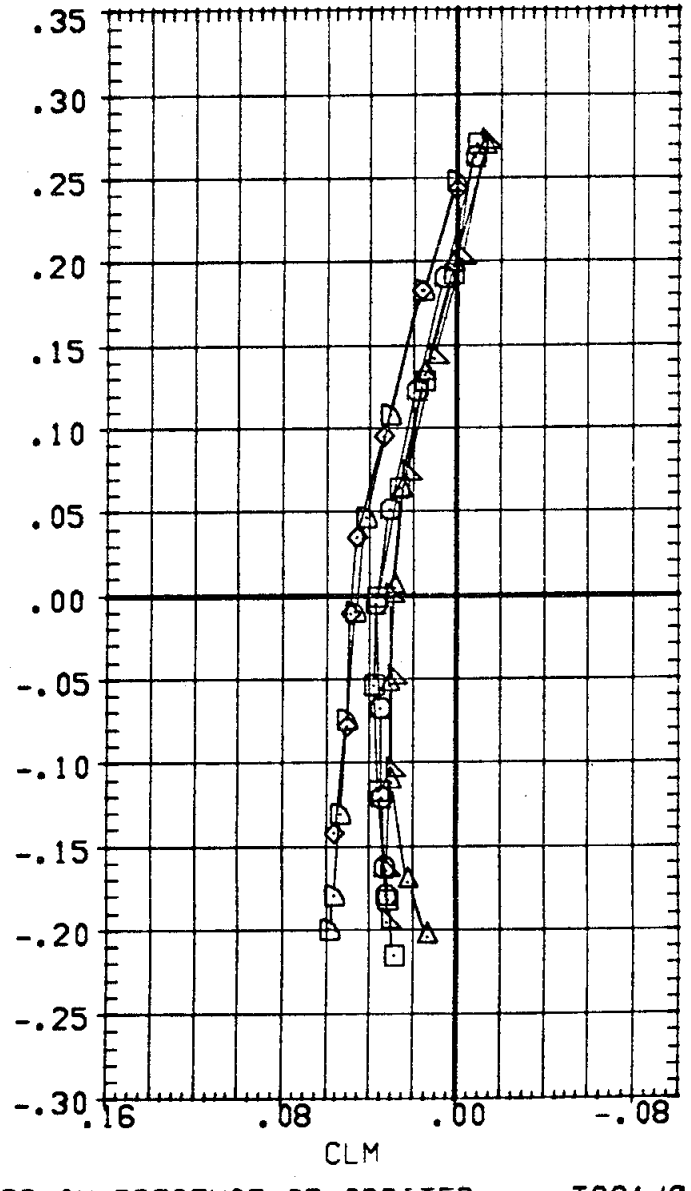
(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72122)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72123)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72124)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72125)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72126)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72127)	⊡	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB	REFERENCE INFORMATION		
.000	.120	10.000	-.624	SREF	3220.0000	SQ.FT.
-1.200	.120	10.000	-.624	LREF	1328.0000	IN.
1.500	.120	10.000	-.624	BREF	1328.0000	IN.
.000	.240	10.000	-.624	XMRP	.0000	
-1.200	.240	10.000	-.624	YMRP	.0000	
1.500	.240	10.000	-.624	ZMRP	.0000	
				SCALE	100.0000	PERCNT





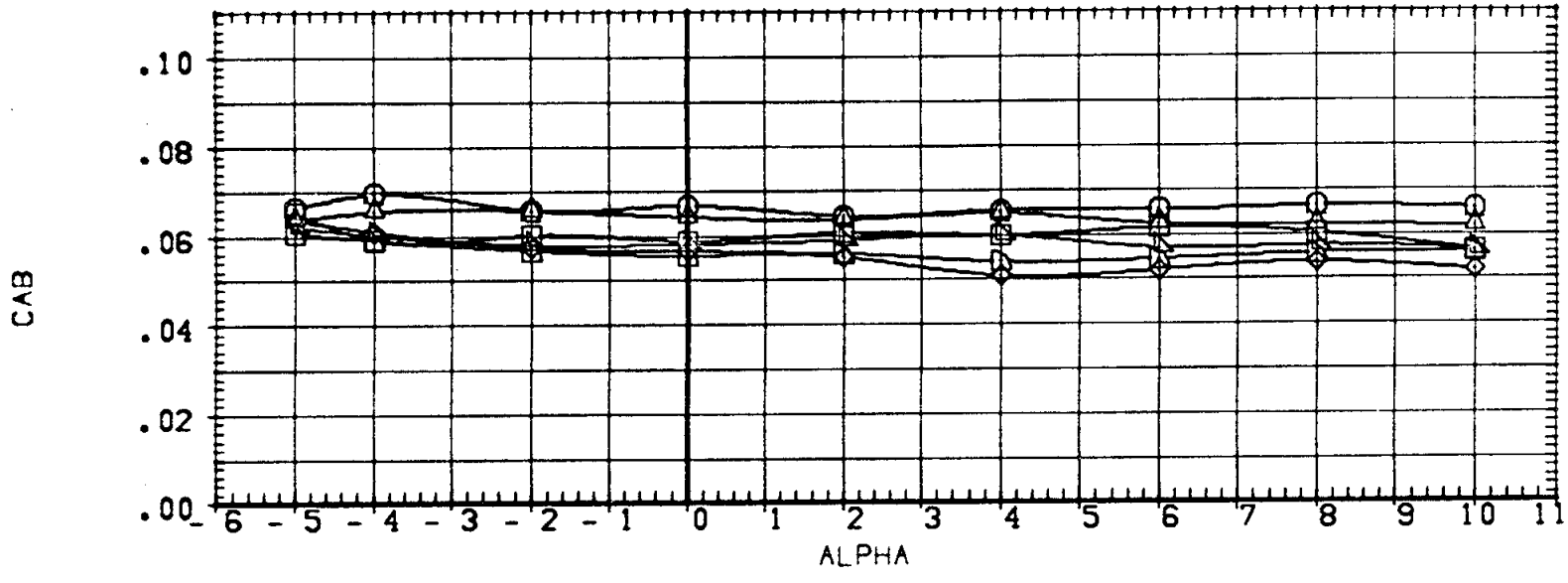


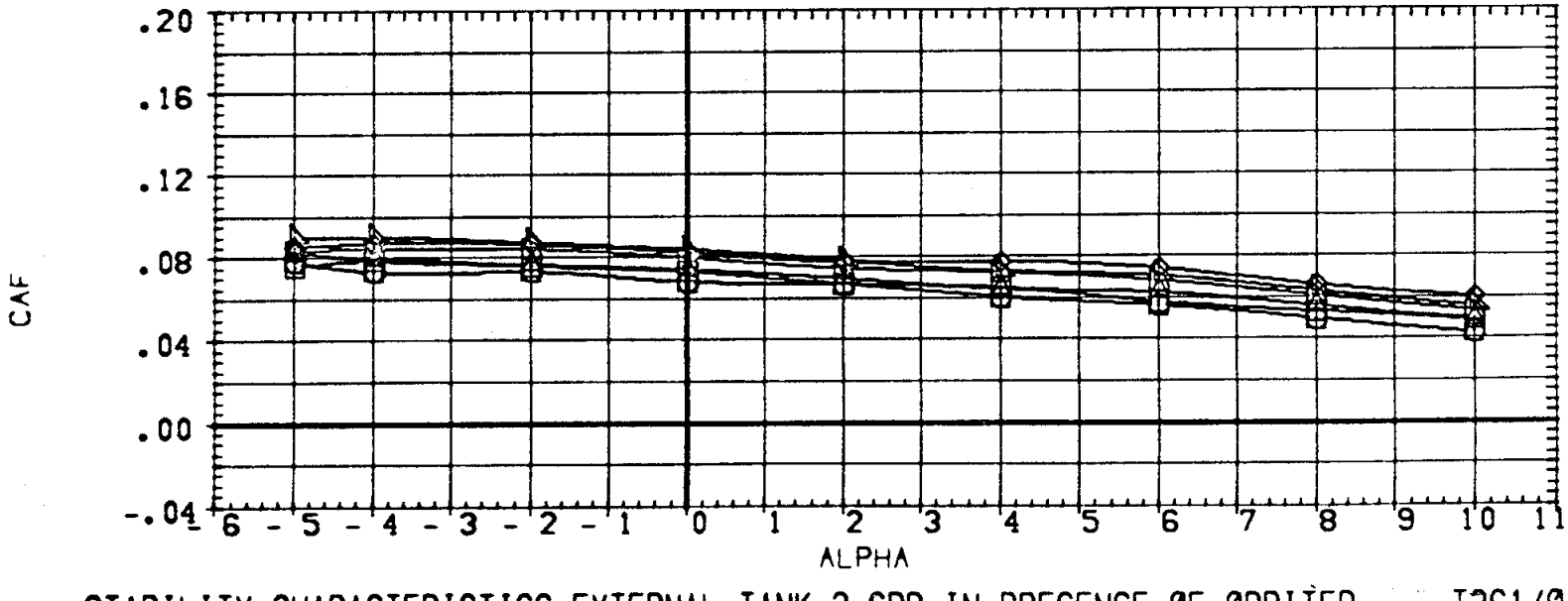
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72122)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	.000	.120	10.000	-.624
(A72123)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.120	10.000	-.624
(A72124)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	1.500	.120	10.000	-.624
(A72125)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	.000	.240	10.000	-.624
(A72126)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	-1.200	.240	10.000	-.624
(A72127)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



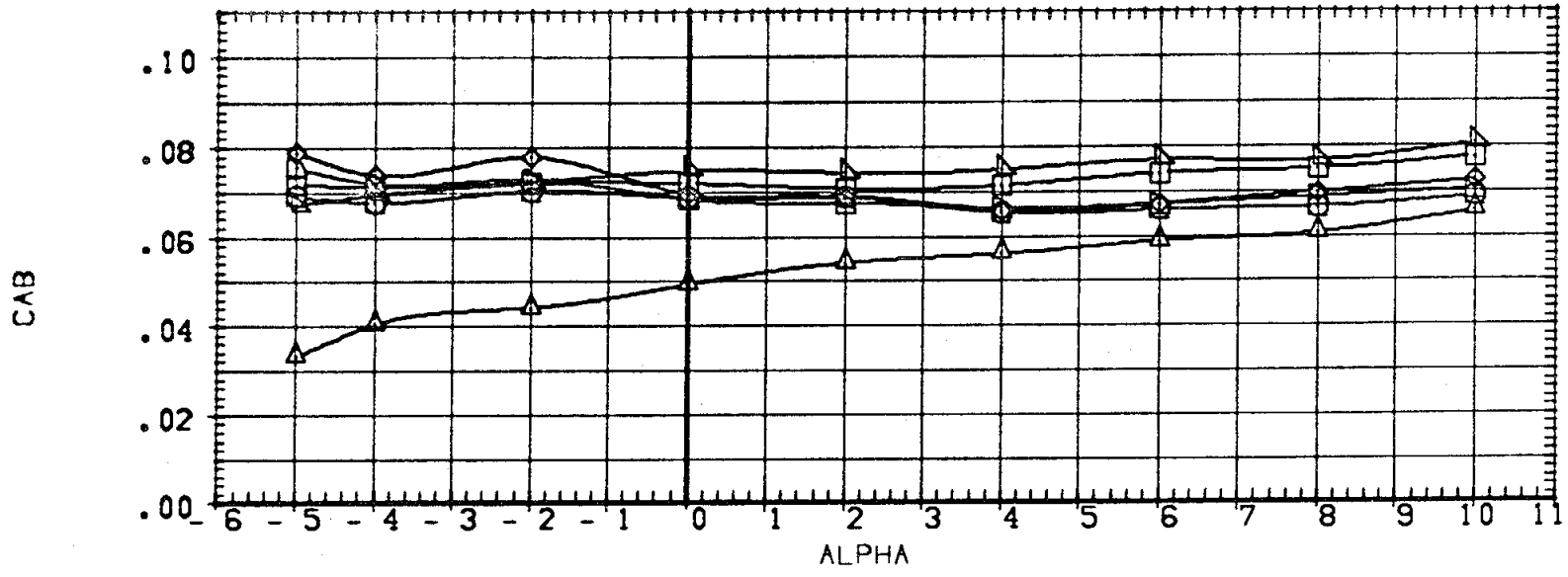


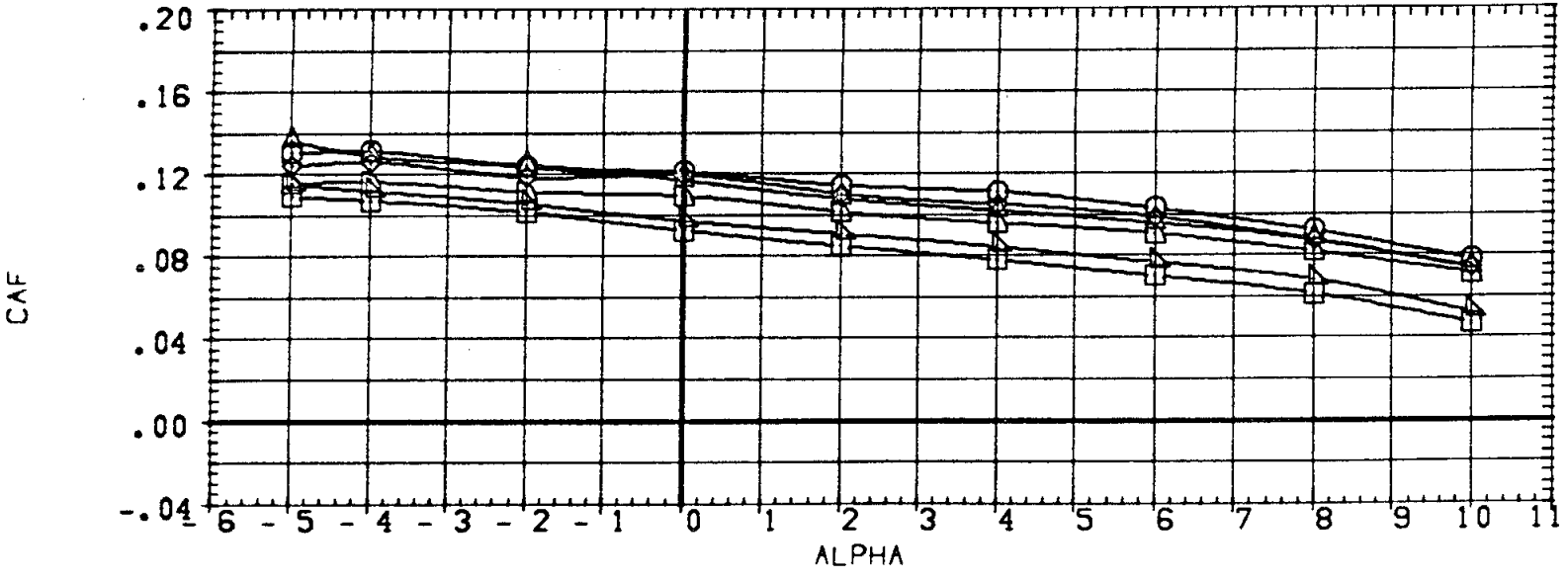
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72122)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624
(A72123)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	-.624
(A72124)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72125)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	-.624
(A72126)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	-.624
(A72127)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



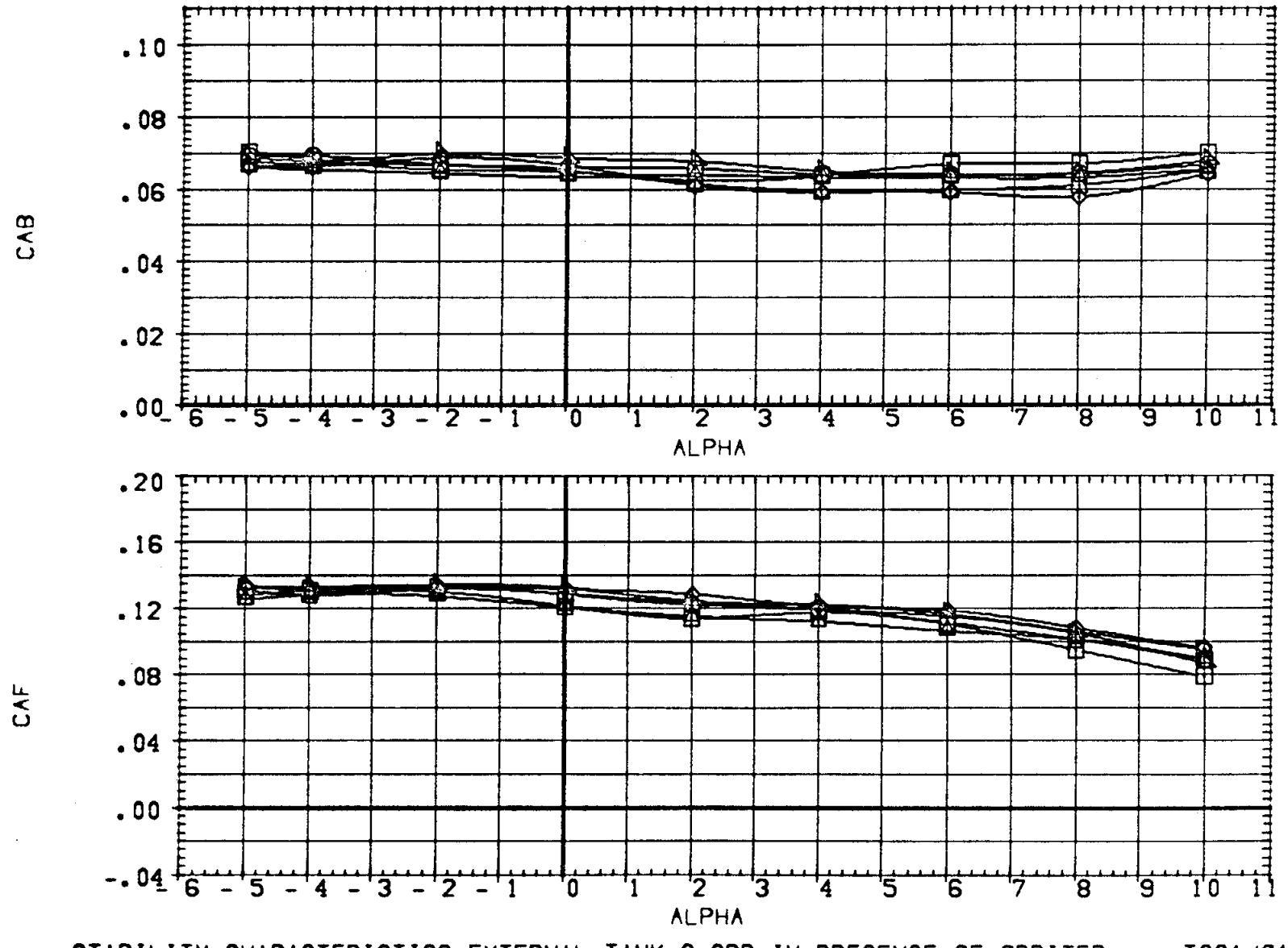


STABILITY CHARACTERISTICS-EXTERNAL TANK 2-SRB IN PRESENCE OF ORBITER, T3S1/01

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72122)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624
(A72123)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	-.624
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72125)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	-.624
(A72126)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	-.624
(A72127)	◁	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

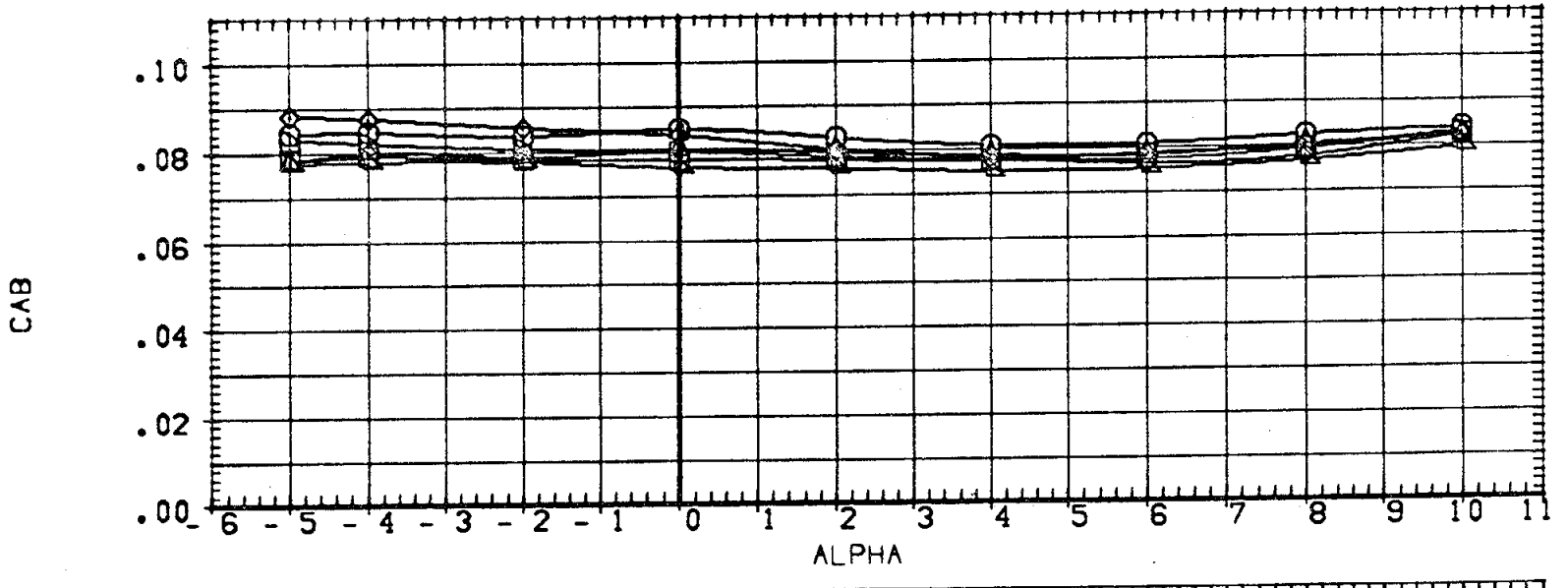


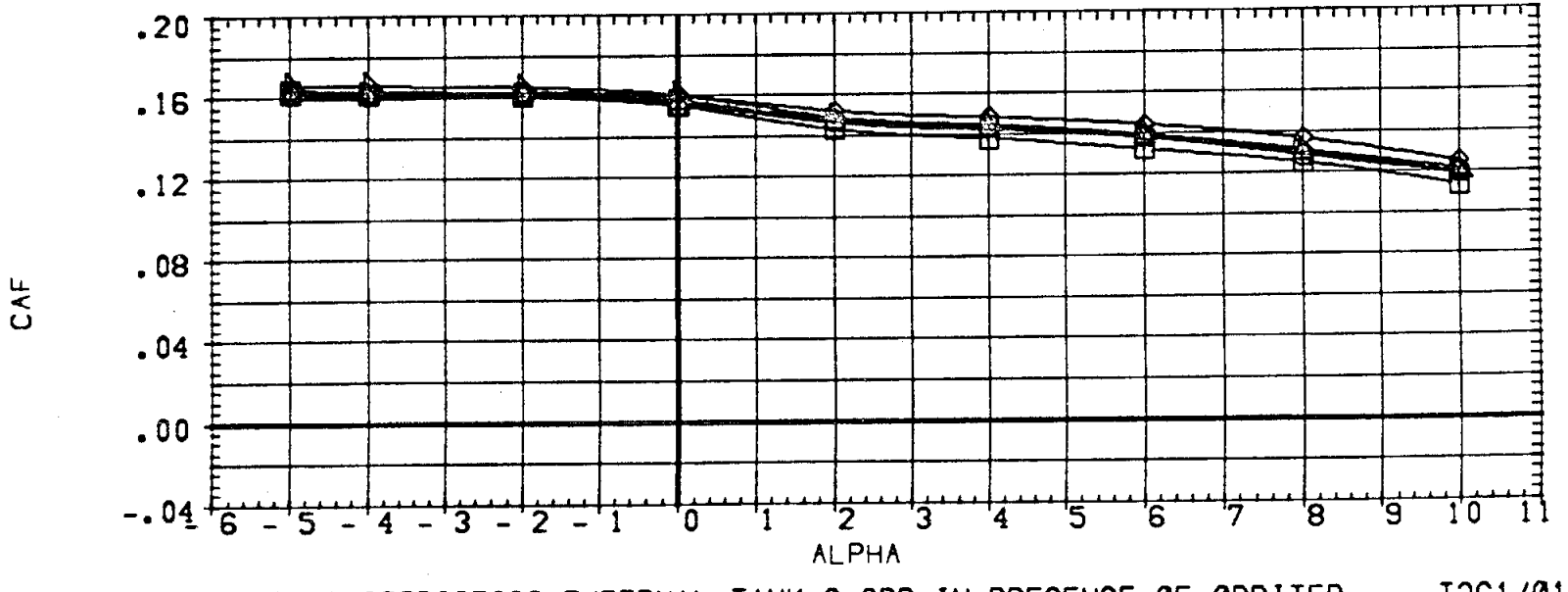
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72122)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624
(A72123)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	-.624
(A72124)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72125)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	-.624
(A72126)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	-.624
(A72127)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



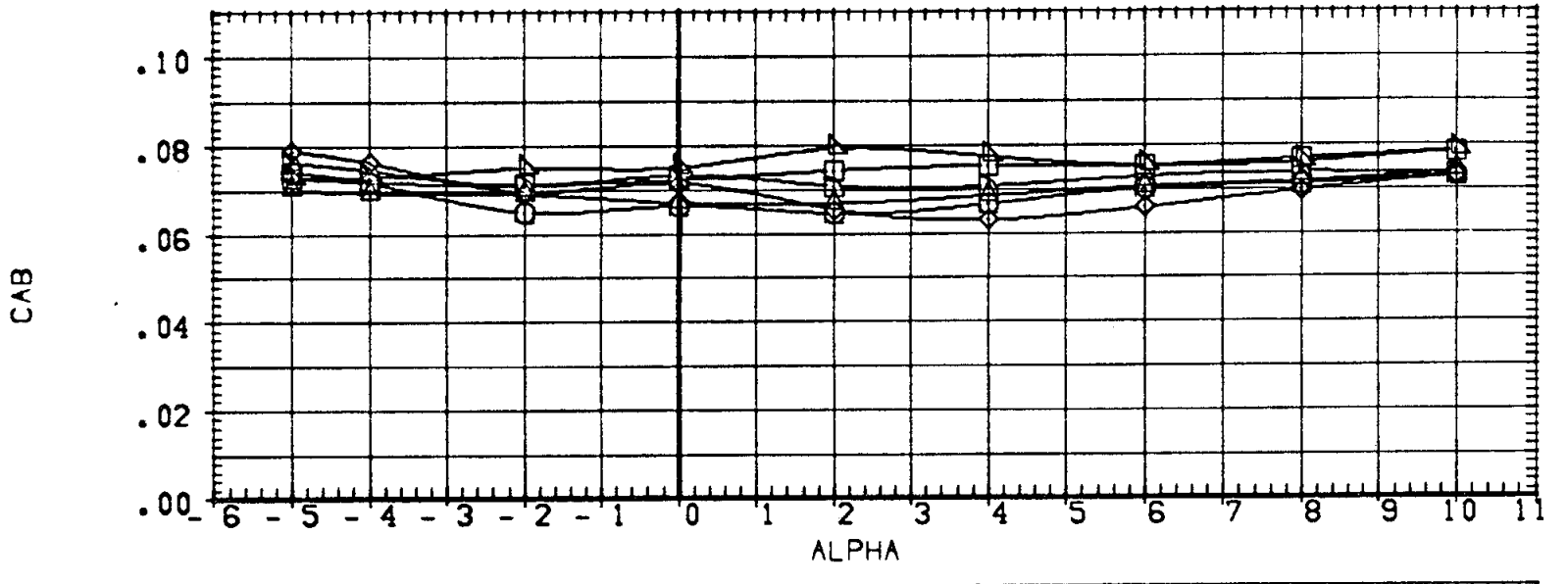


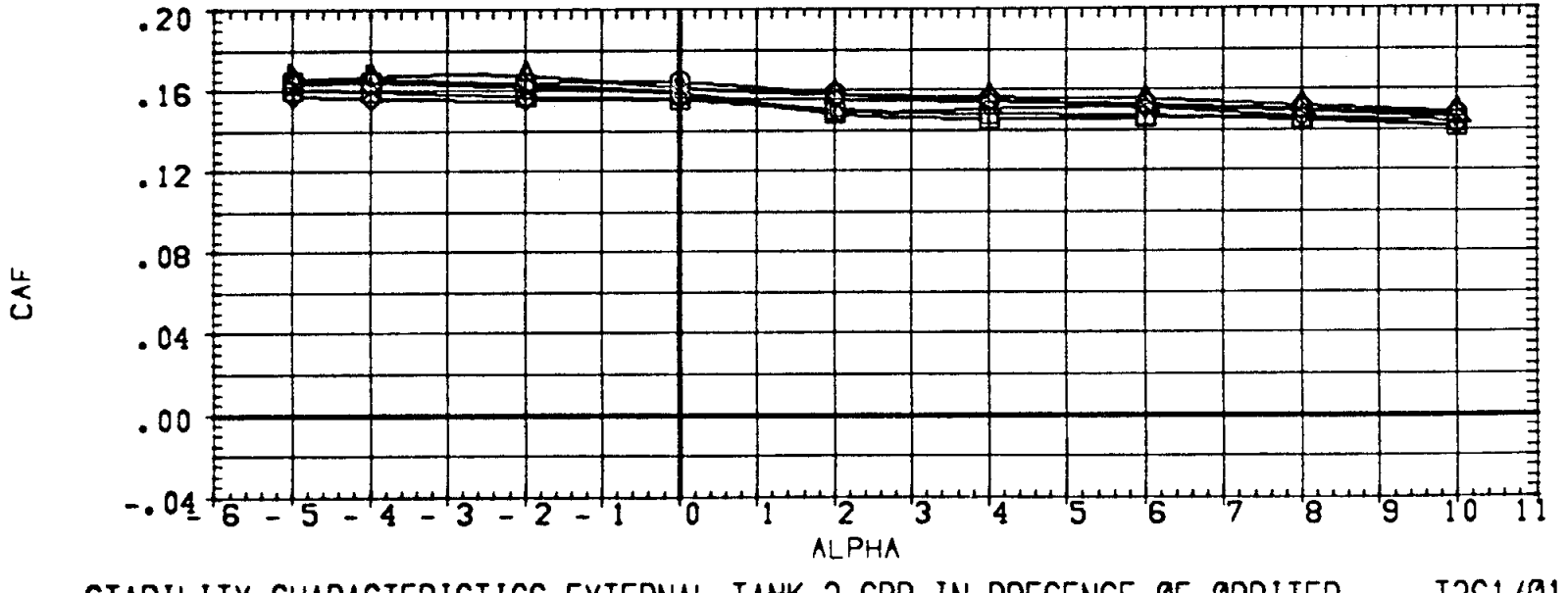
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72122)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624
(A72123)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	-.624
(A72124)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72125)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	-.624
(A72126)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	-.624
(A72127)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.8000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



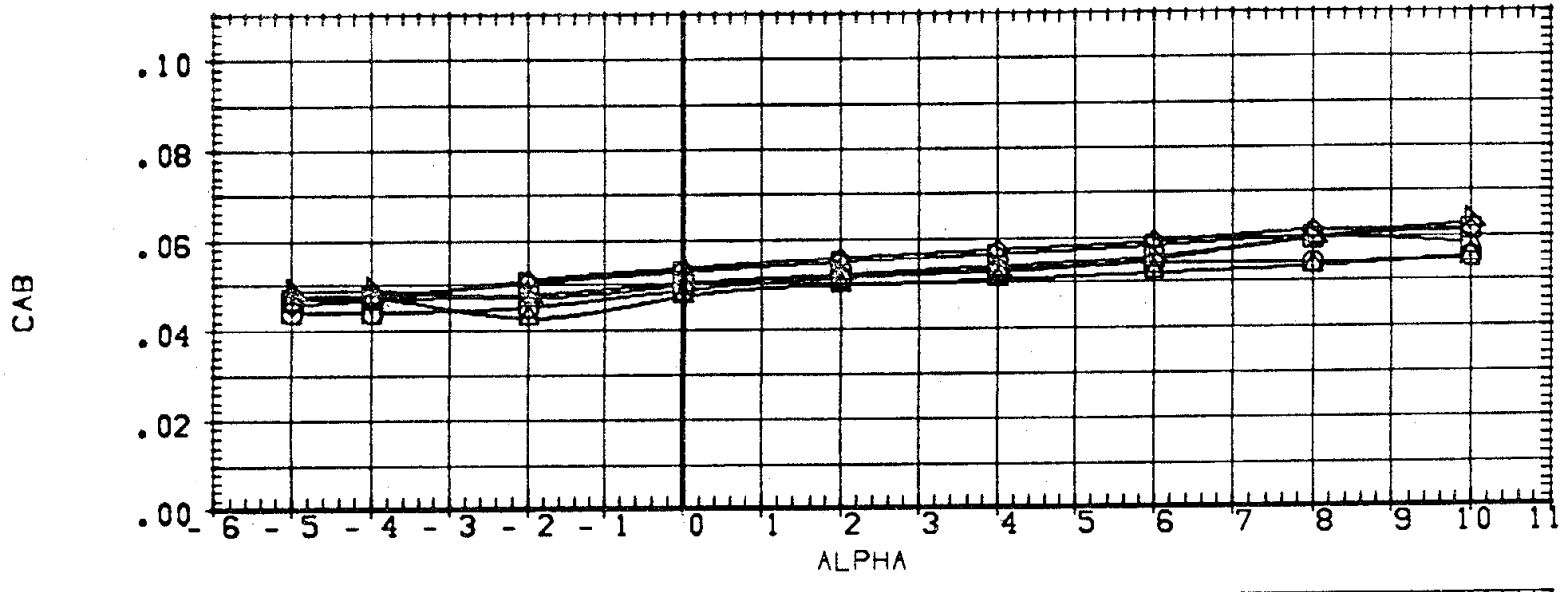


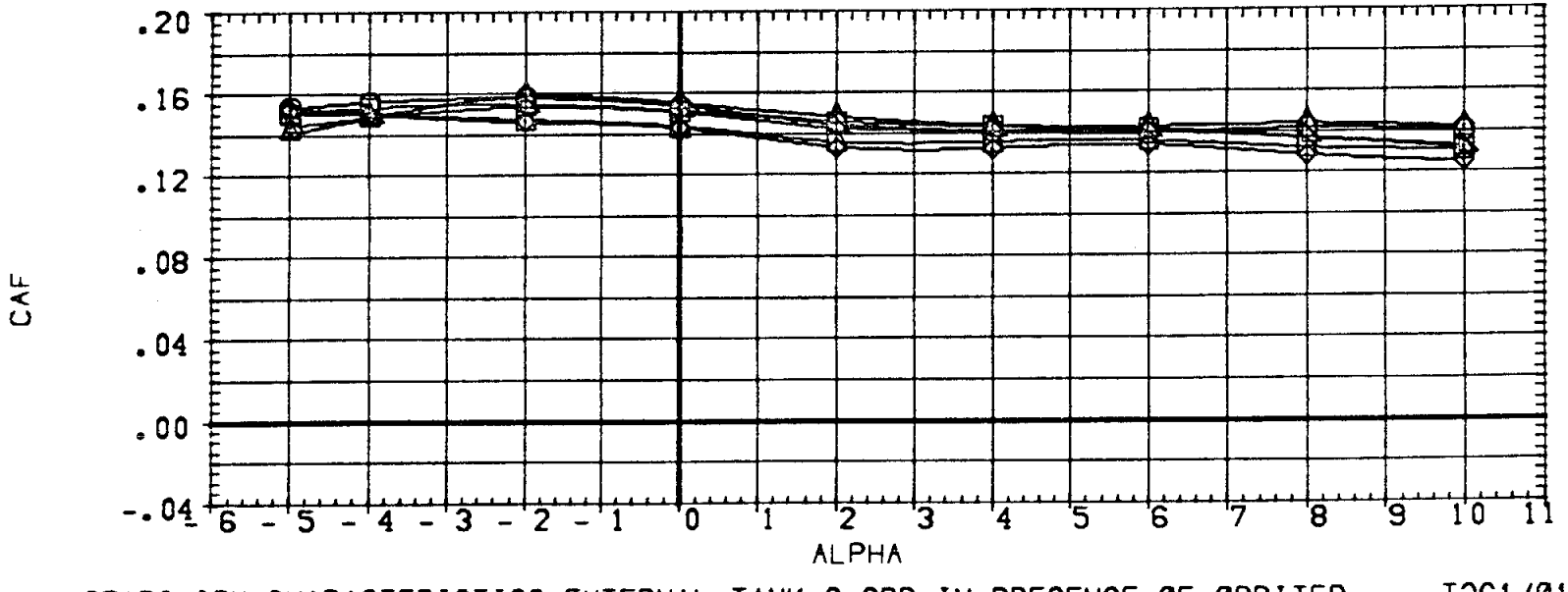
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72122)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624
(A72123)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	-.624
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72125)	⊗	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	-.624
(A72126)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	-.624
(A72127)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





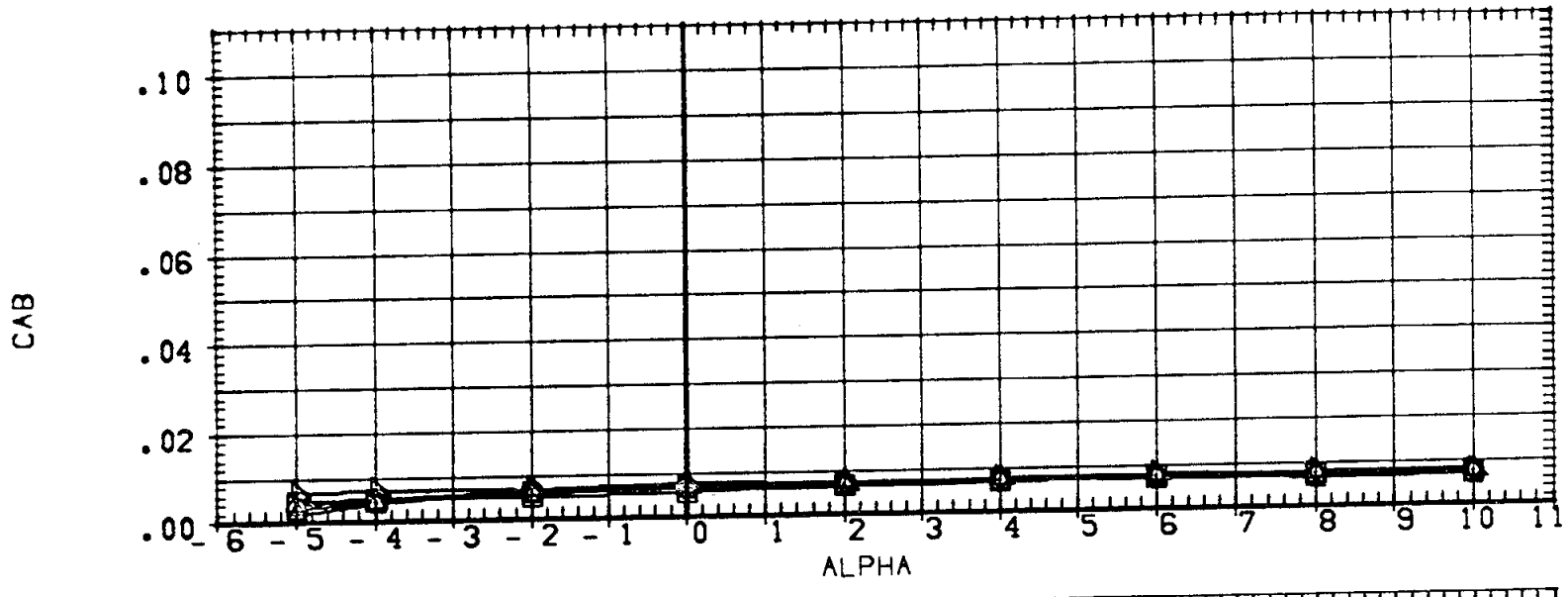
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER. T3S1/01

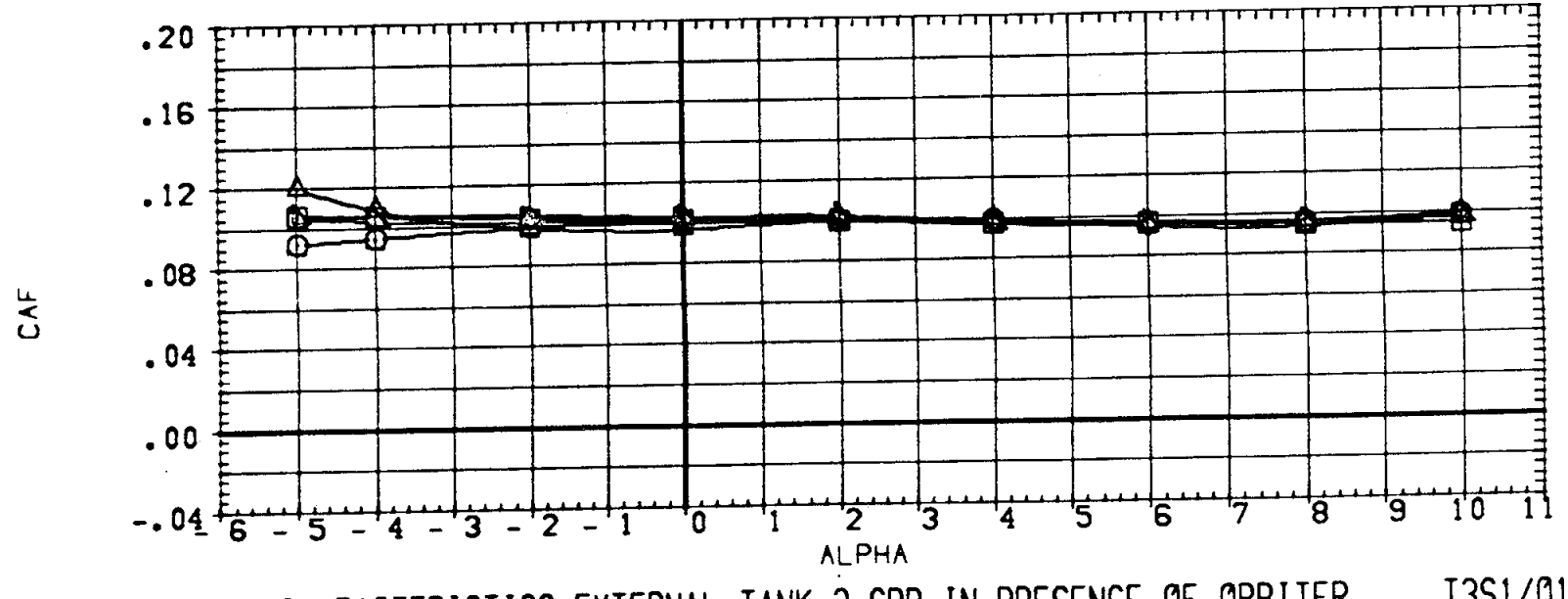
(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72122)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72123)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72124)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72125)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72126)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72127)	⬡	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



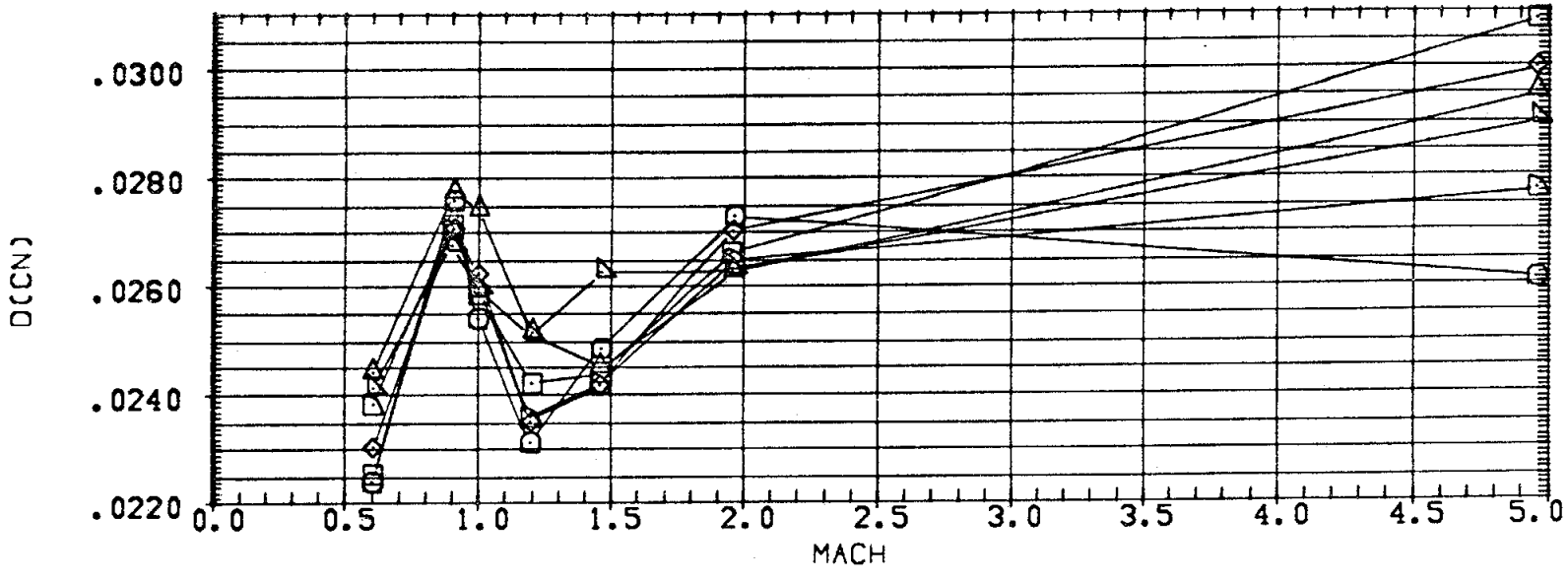


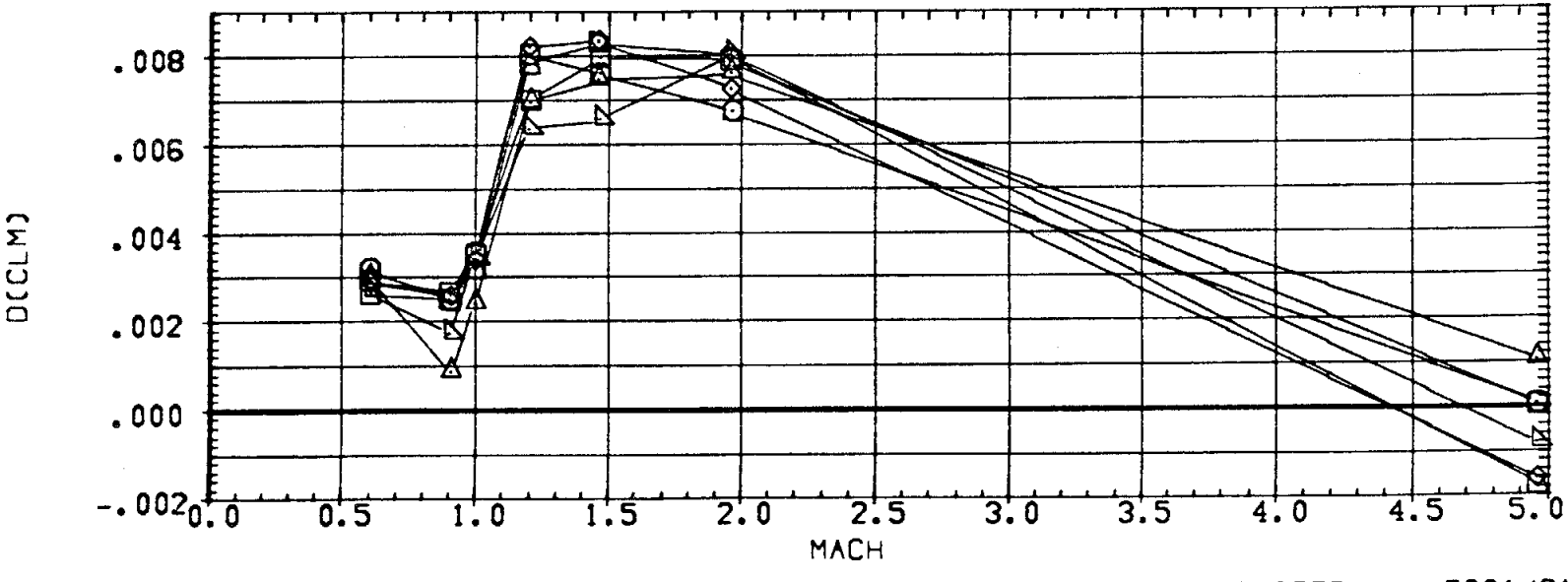
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872122)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624
(872123)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	-.624
(872124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(872125)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	-.624
(872126)	⋈	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	-.624
(872127)	⋈	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

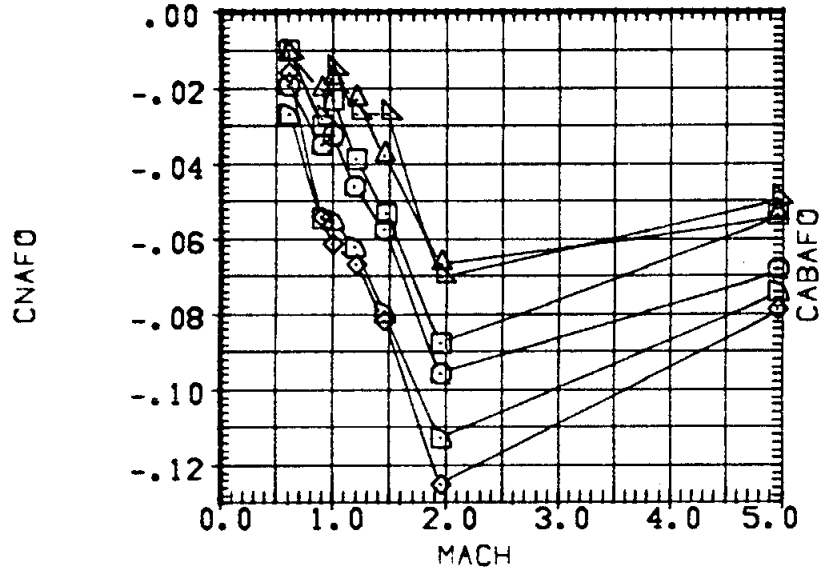


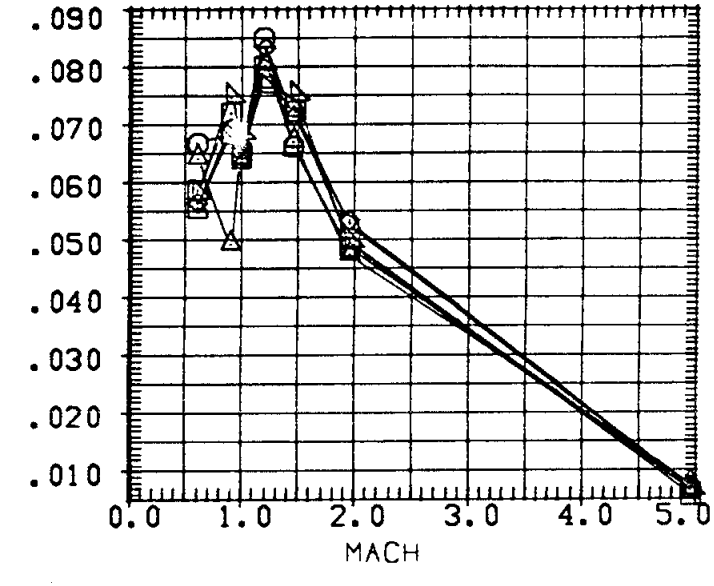


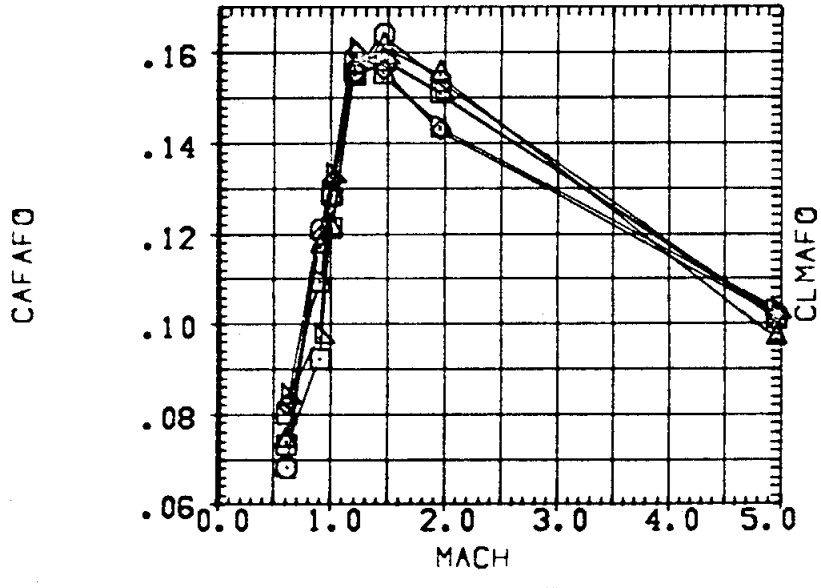
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER. T3S1/01

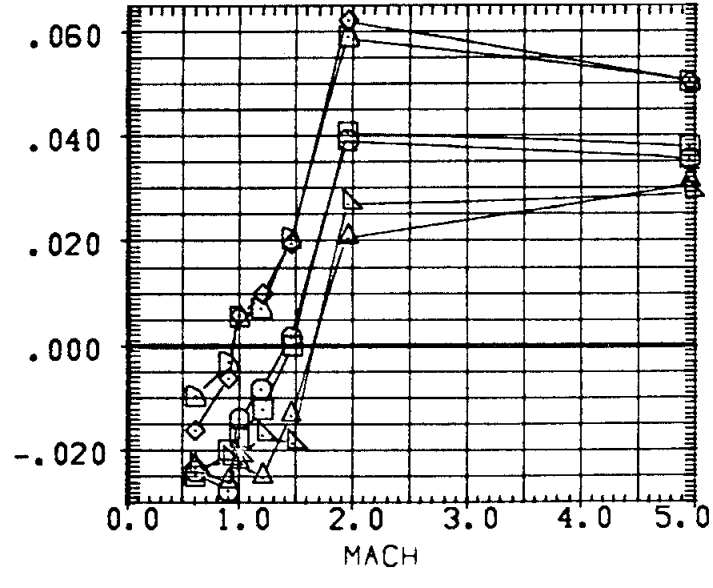
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872122)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624
(872123)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	-.624
(872124)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(872125)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.240	10.000	-.624
(872126)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.240	10.000	-.624
(872127)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





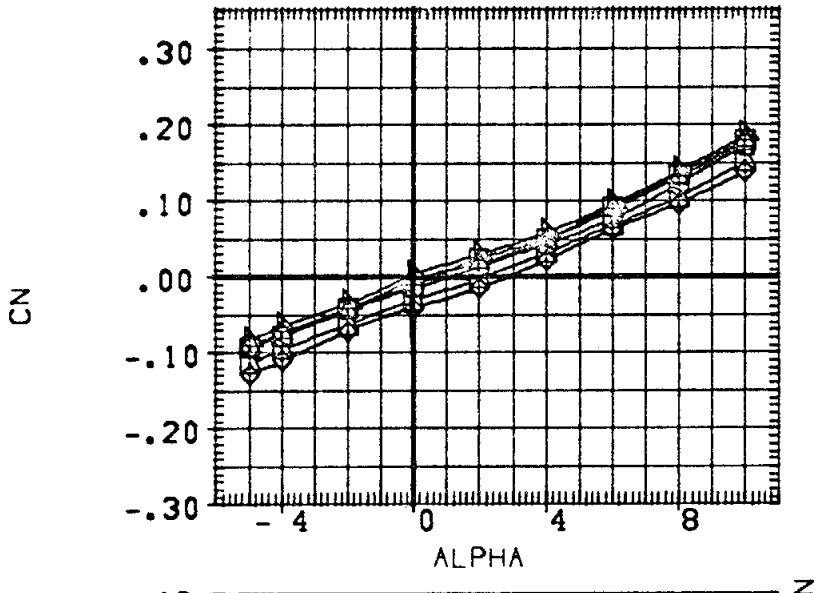


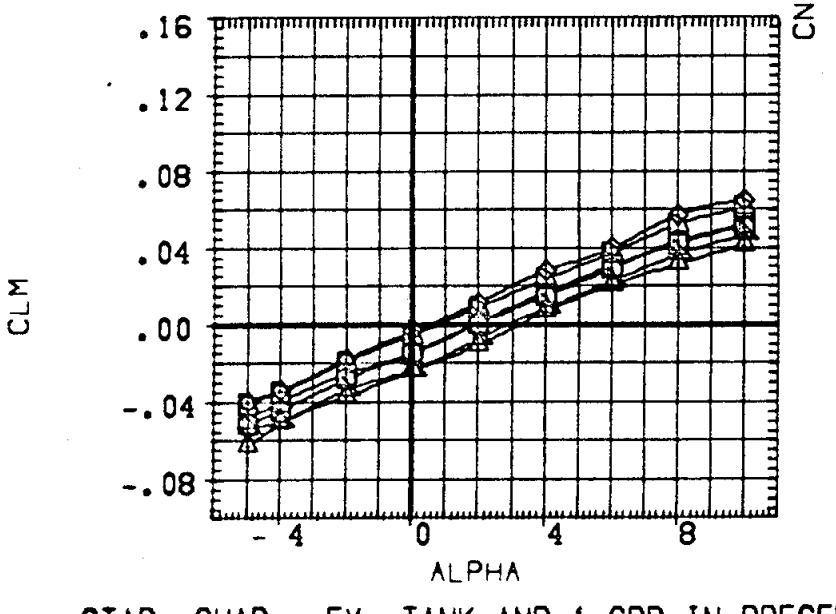


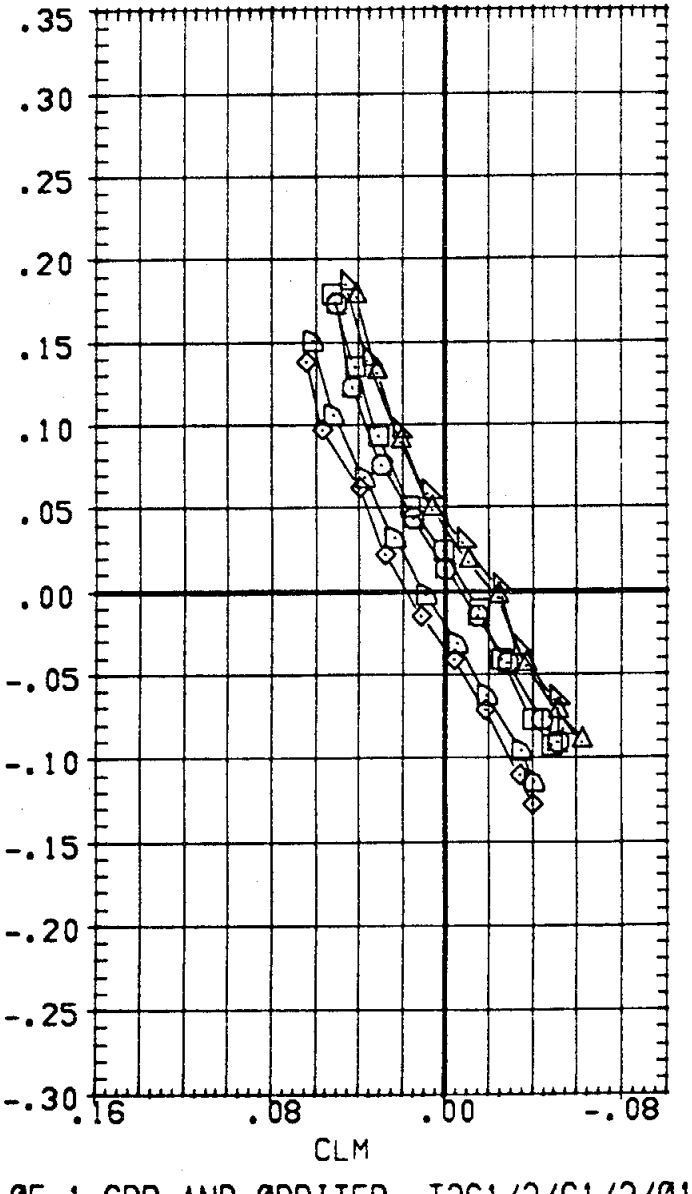
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





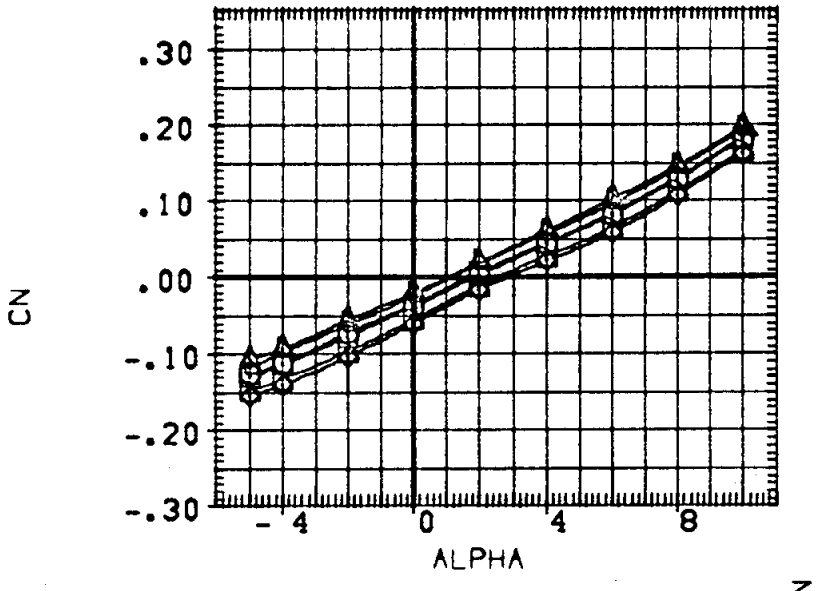


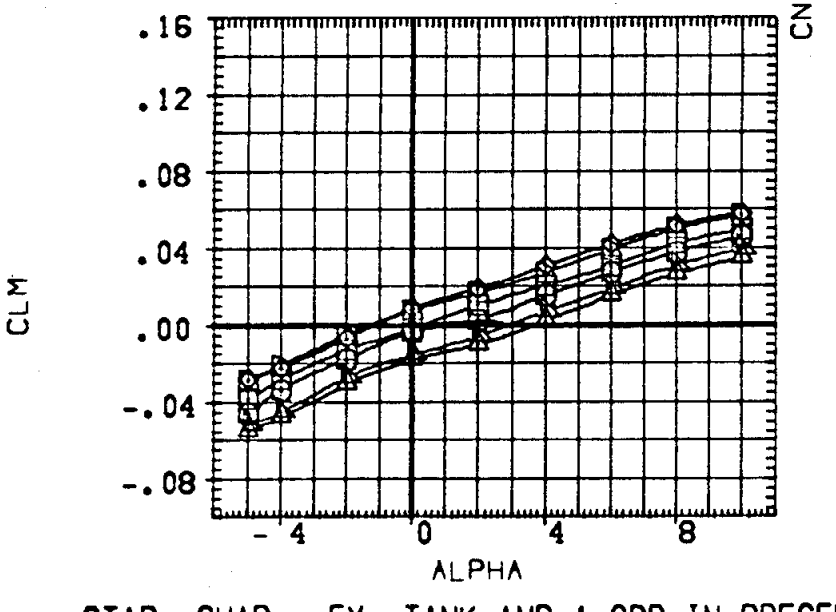
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

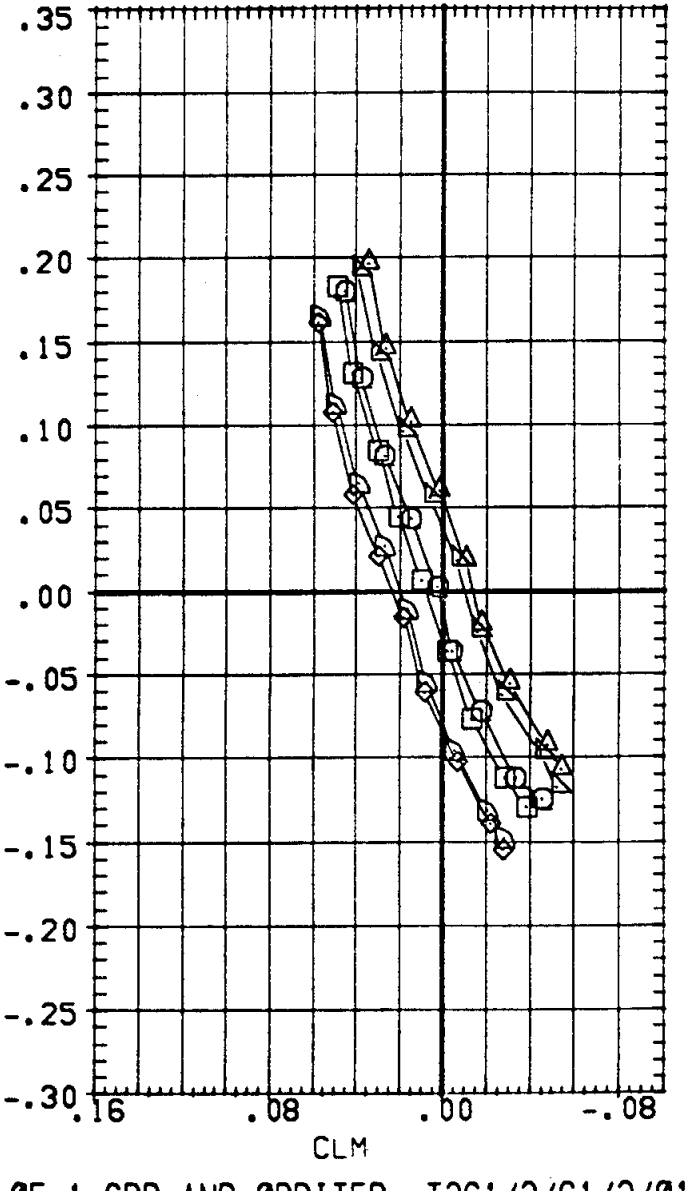
(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





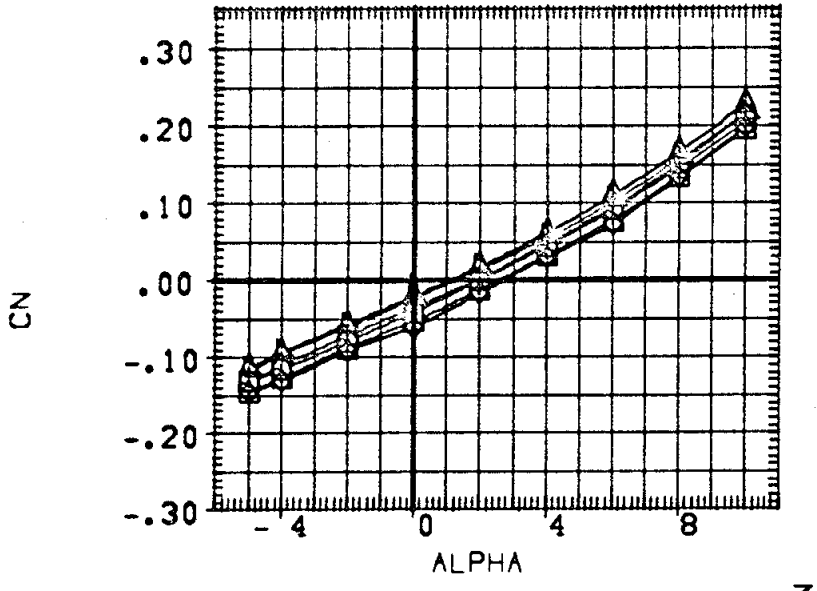


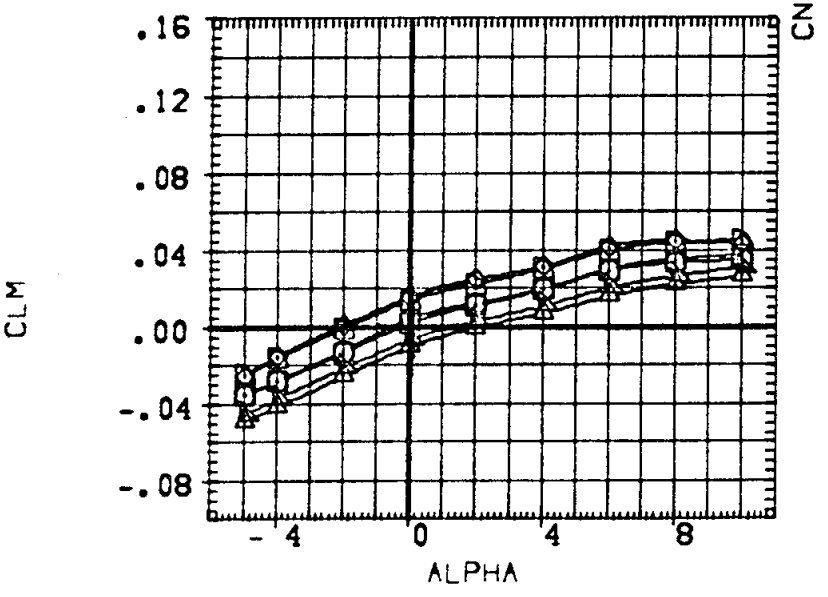
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

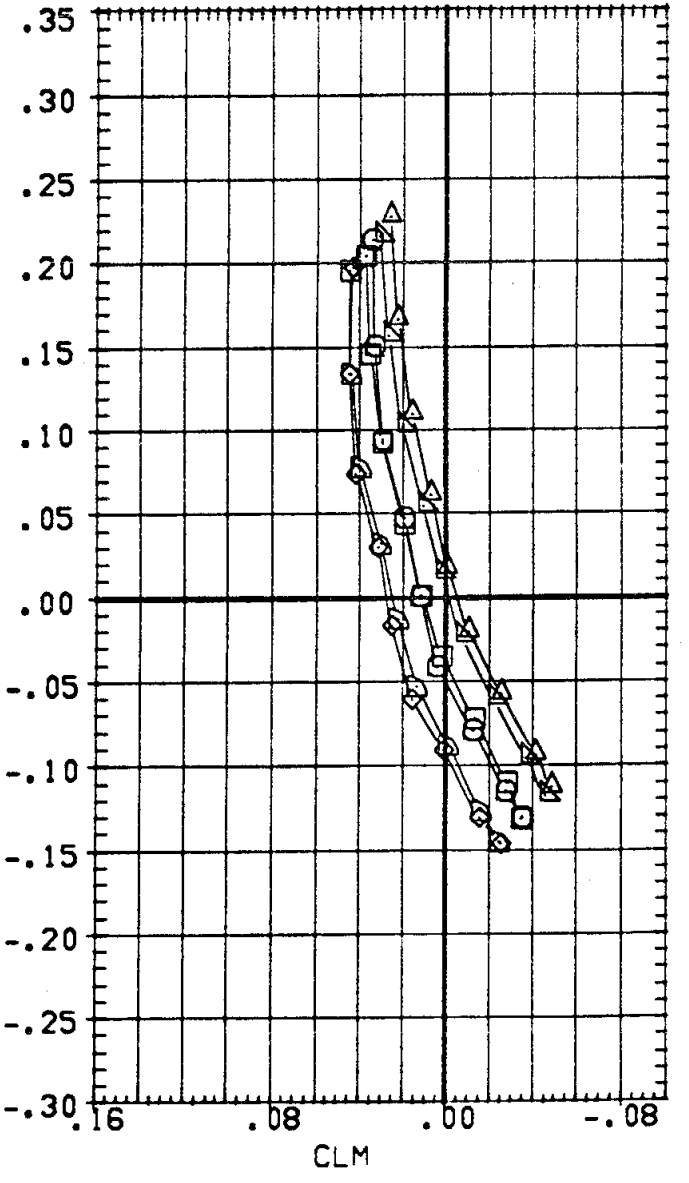
(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





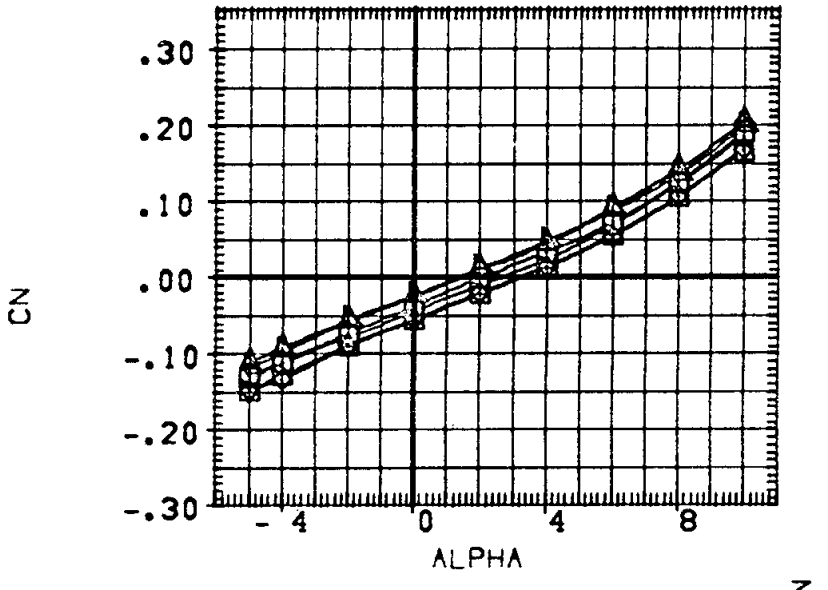


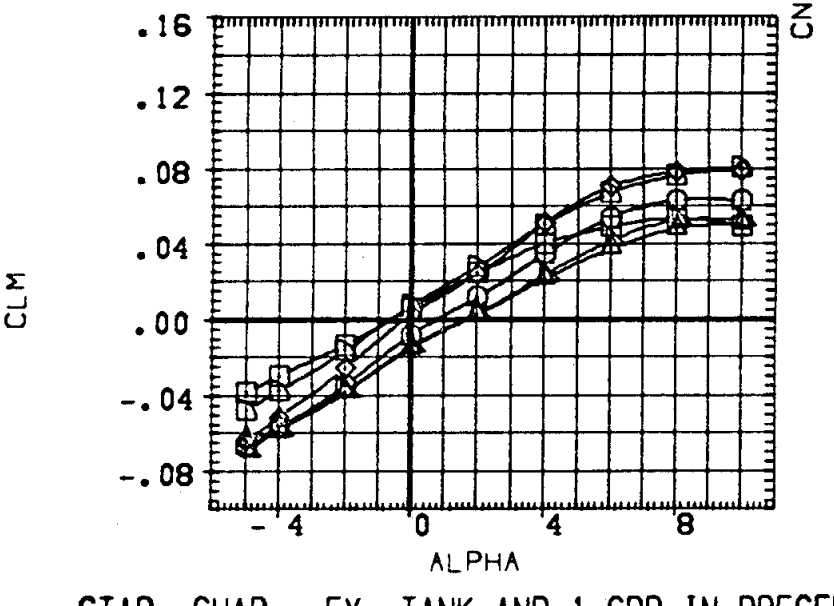
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

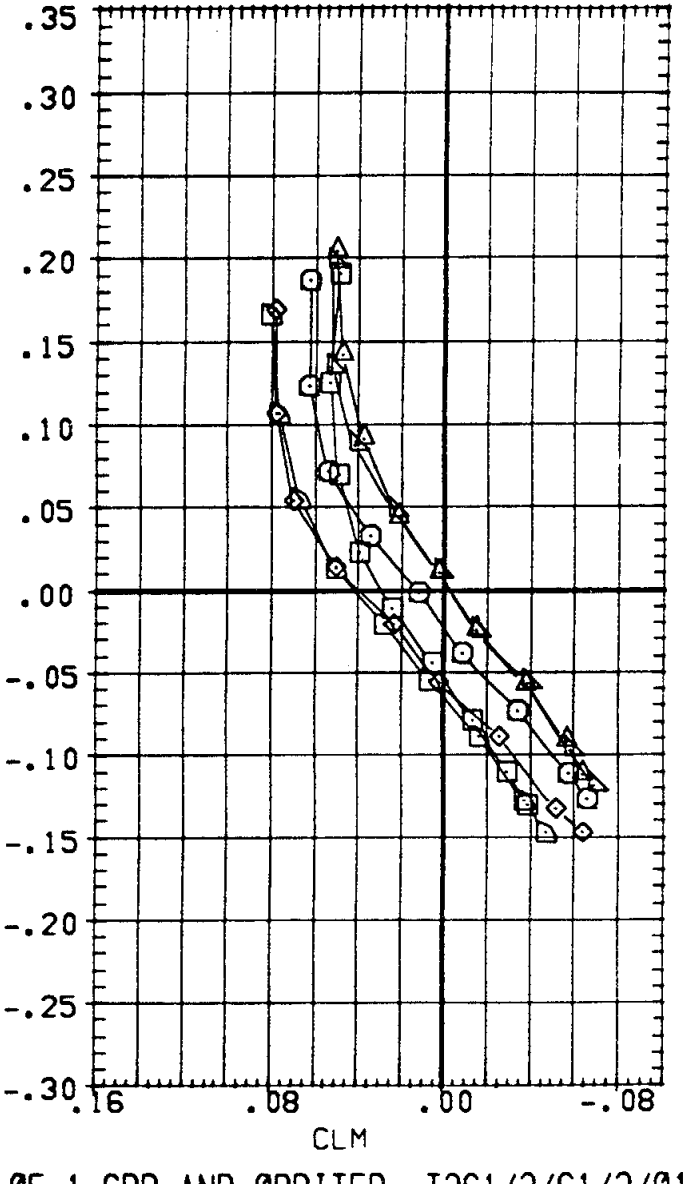
(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION			
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





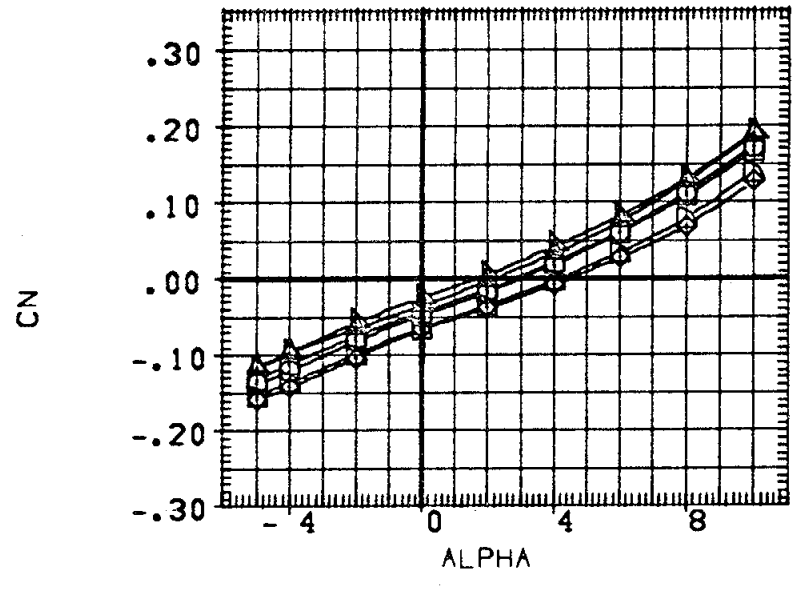


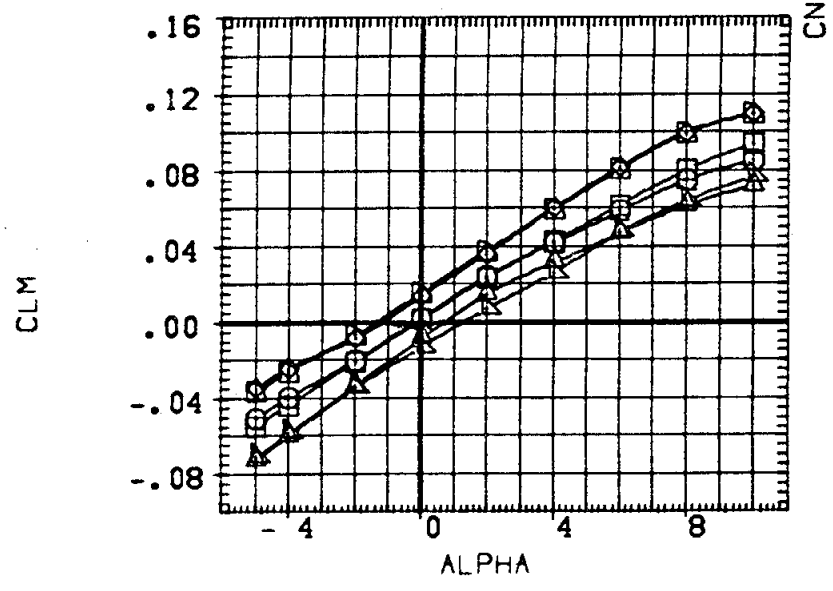
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

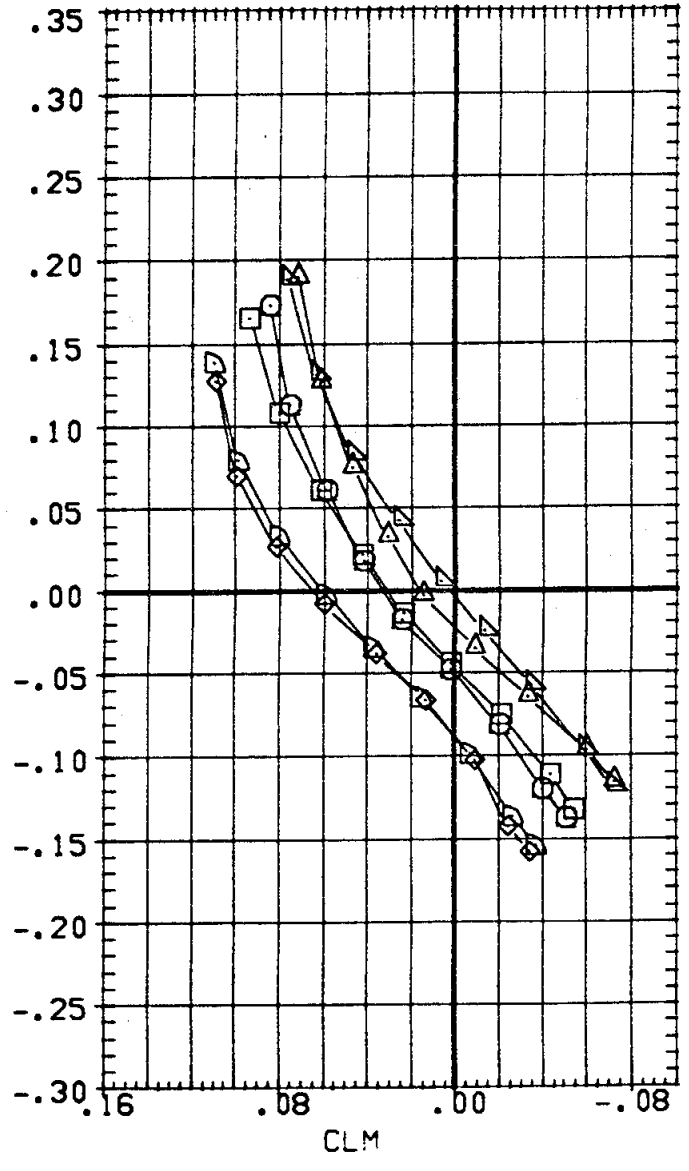
(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	.000	.120	10.000	.000
(A72137)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	-1.200	.120	10.000	.000
(A72138)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	1.500	.120	10.000	.000
(A72139)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	.000	.240	10.000	.000
(A72140)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	-1.200	.240	10.000	.000
(A72141)	◁	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





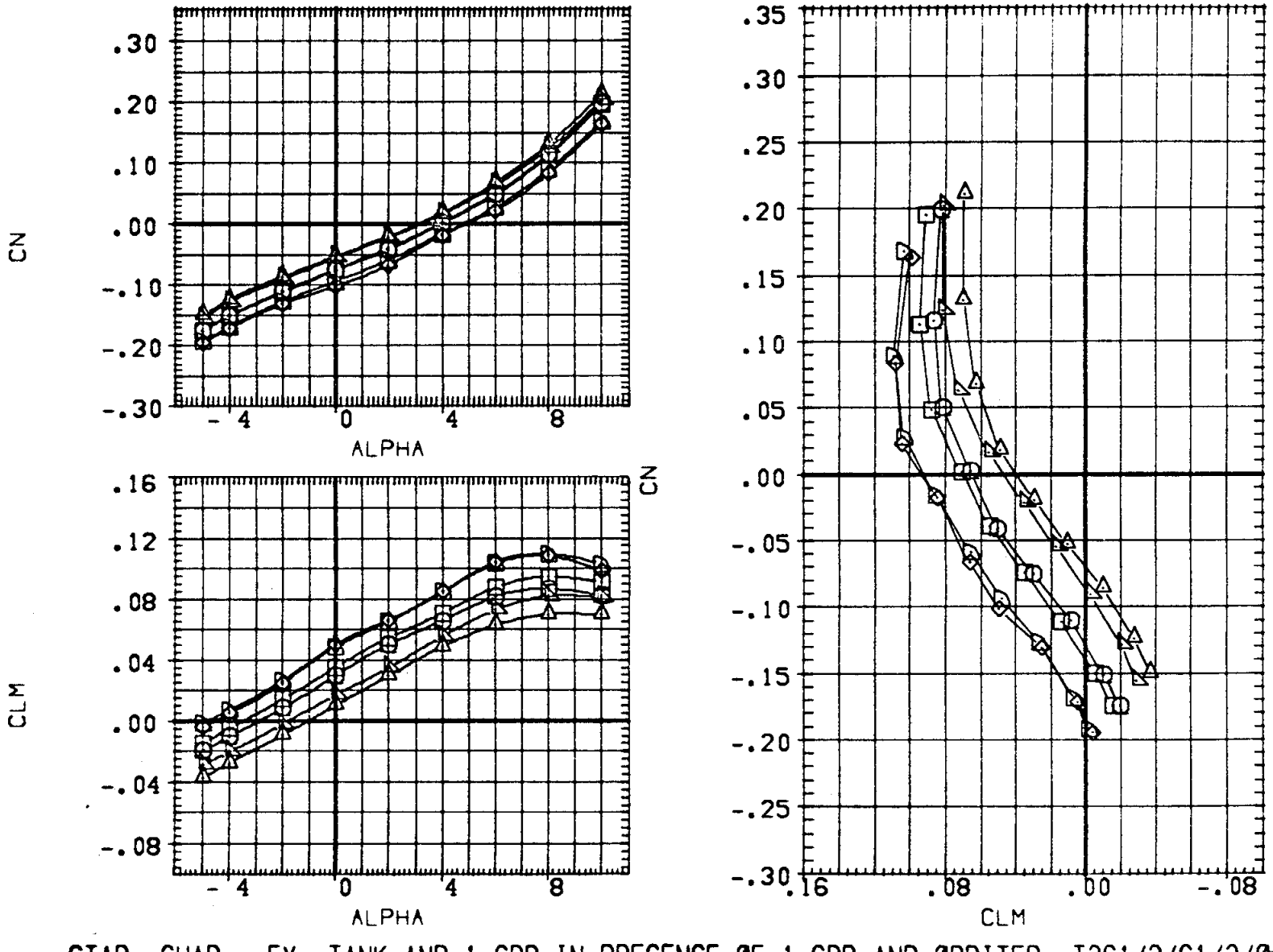


STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

(E)MACH = 1.47

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	.000	.120	10.000	.000
(A72137)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	-1.200	.120	10.000	.000
(A72138)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	1.500	.120	10.000	.000
(A72139)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	.000	.240	10.000	.000
(A72140)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	-1.200	.240	10.000	.000
(A72141)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

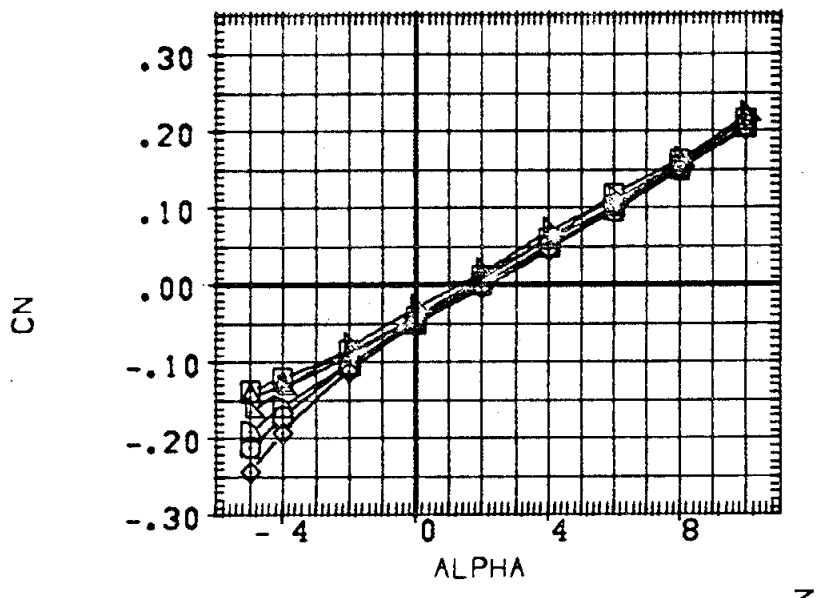


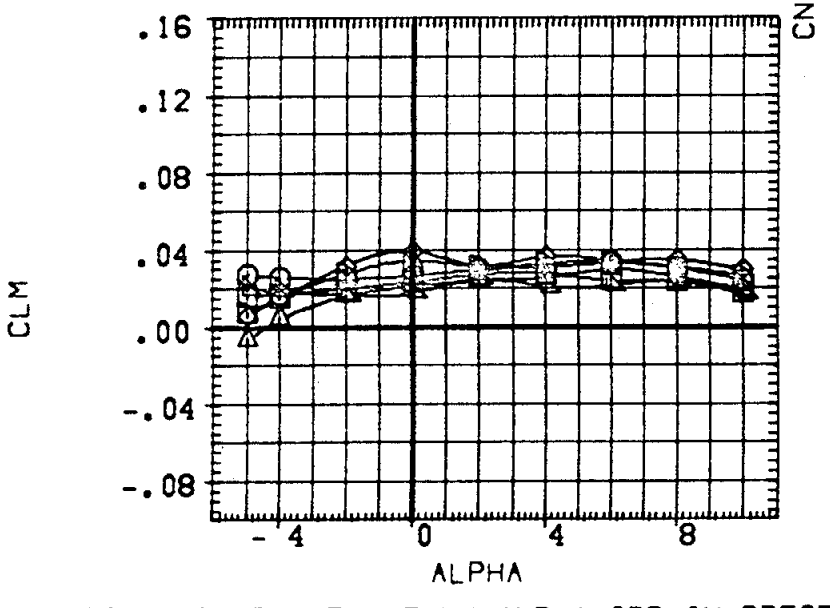
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

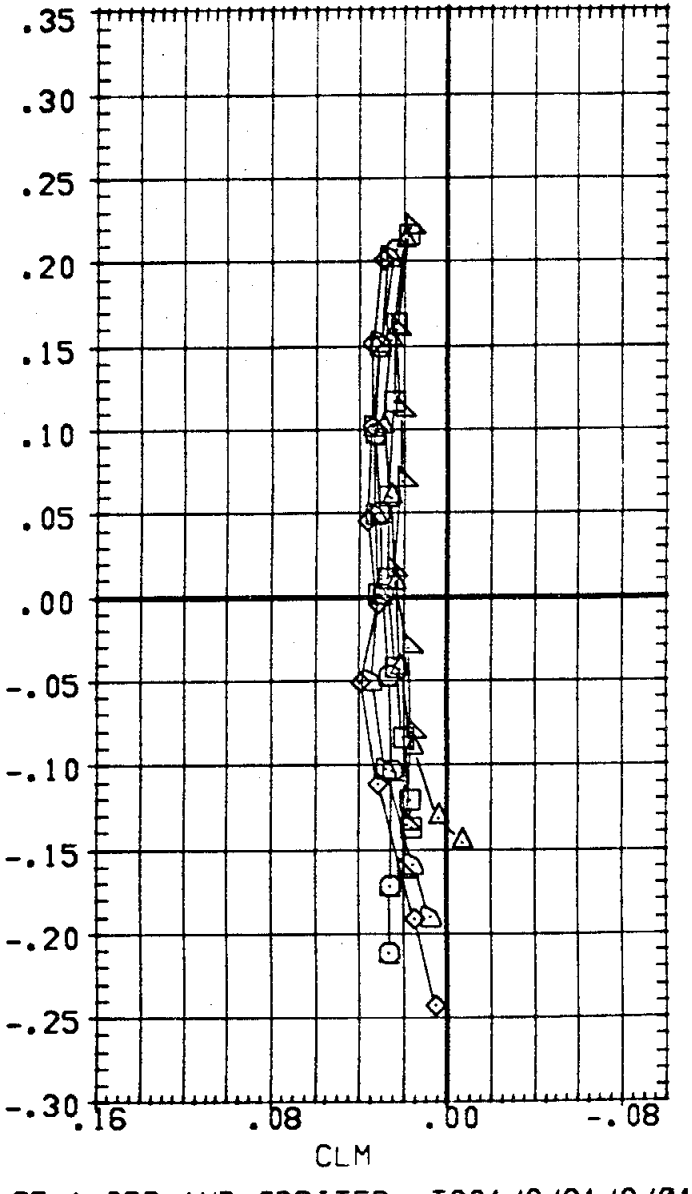
(F)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





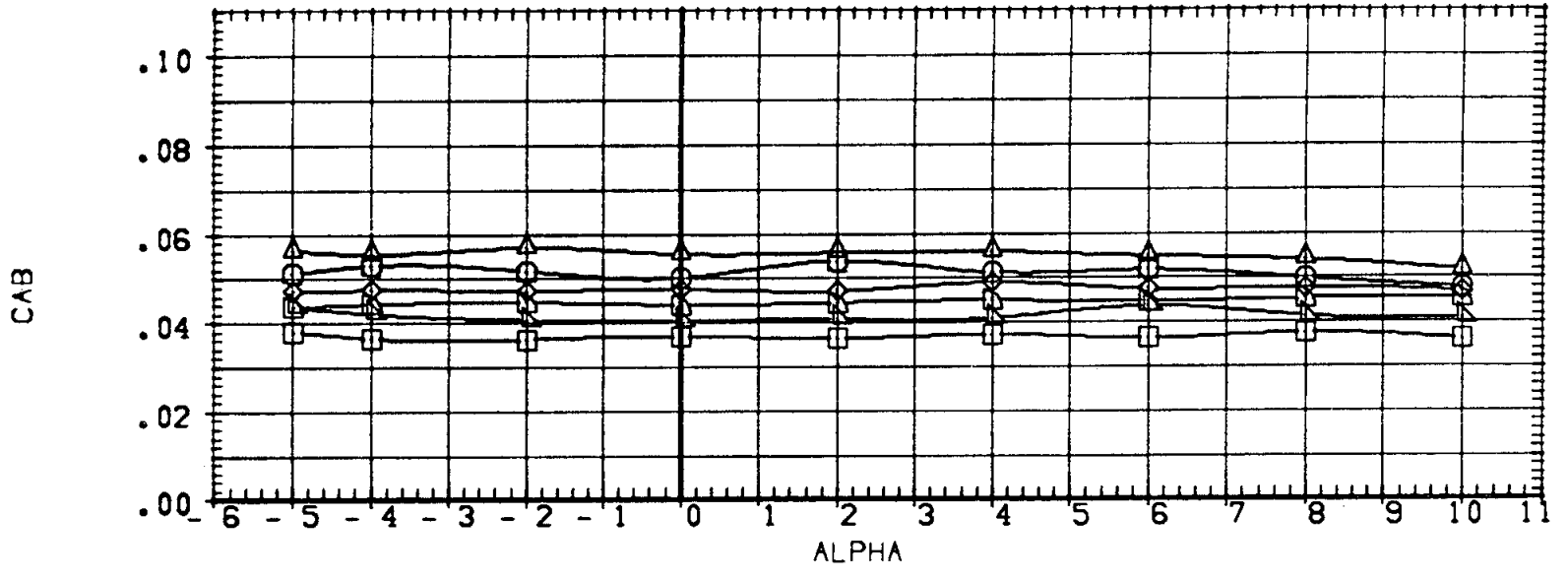


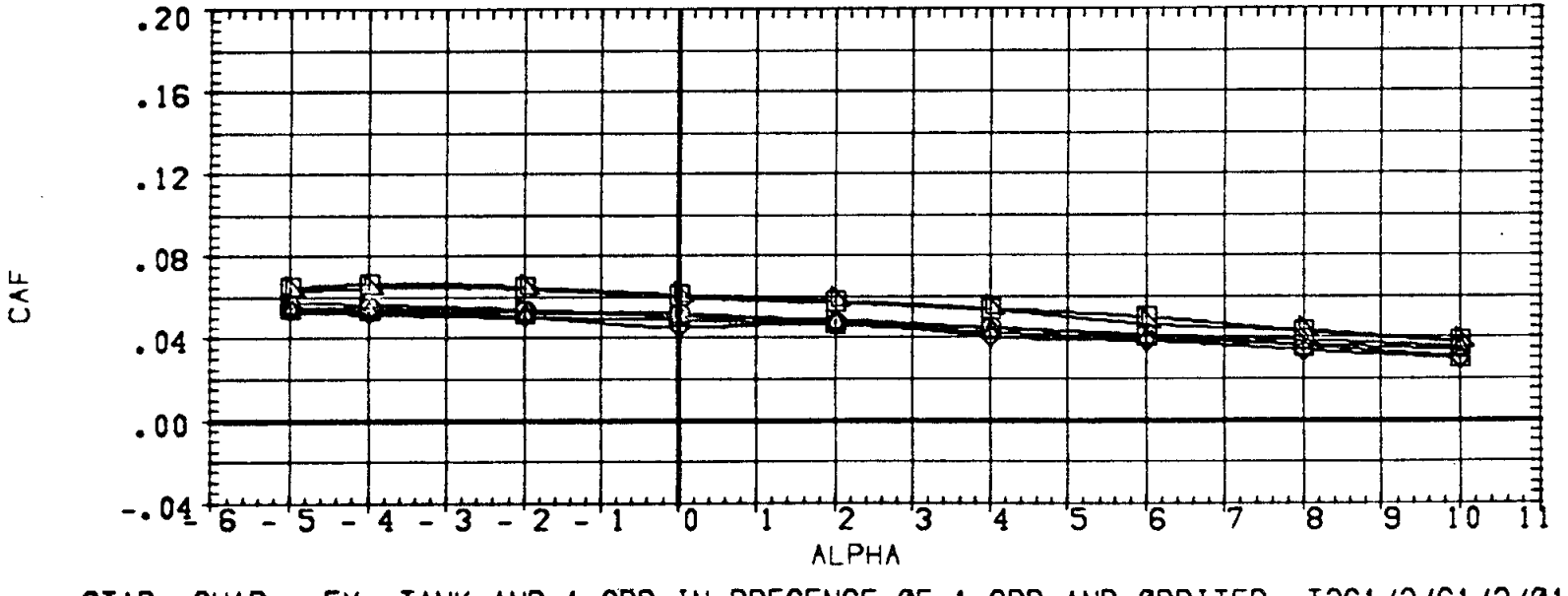
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



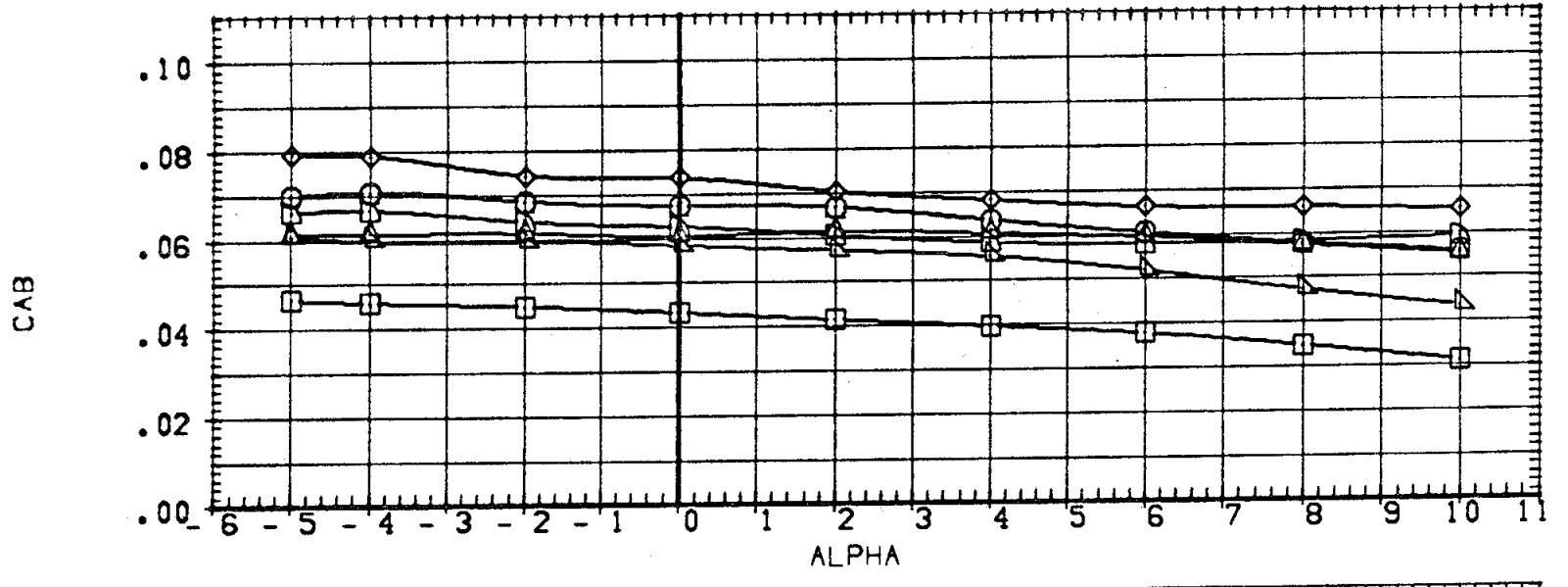


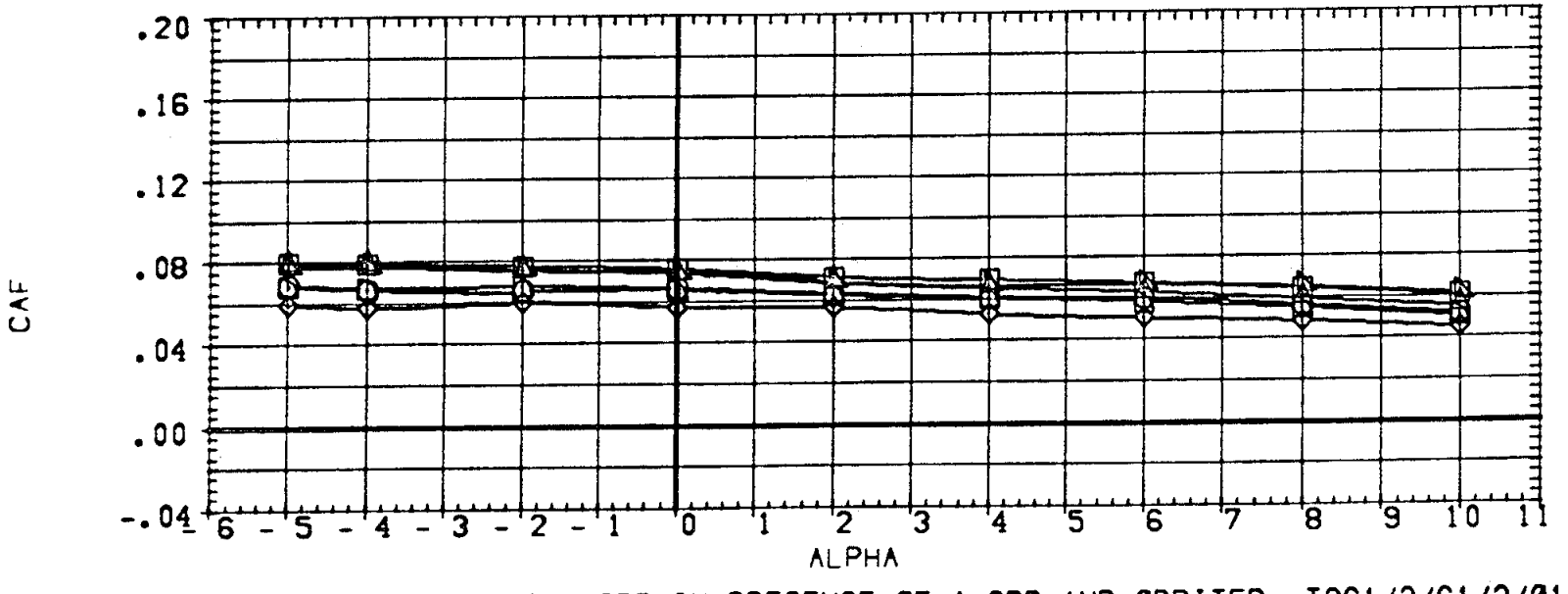
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	.000	.120	10.000	.000
(A72137)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	-1.200	.120	10.000	.000
(A72138)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	1.500	.120	10.000	.000
(A72139)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	.000	.240	10.000	.000
(A72140)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	-1.200	.240	10.000	.000
(A72141)	◁	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



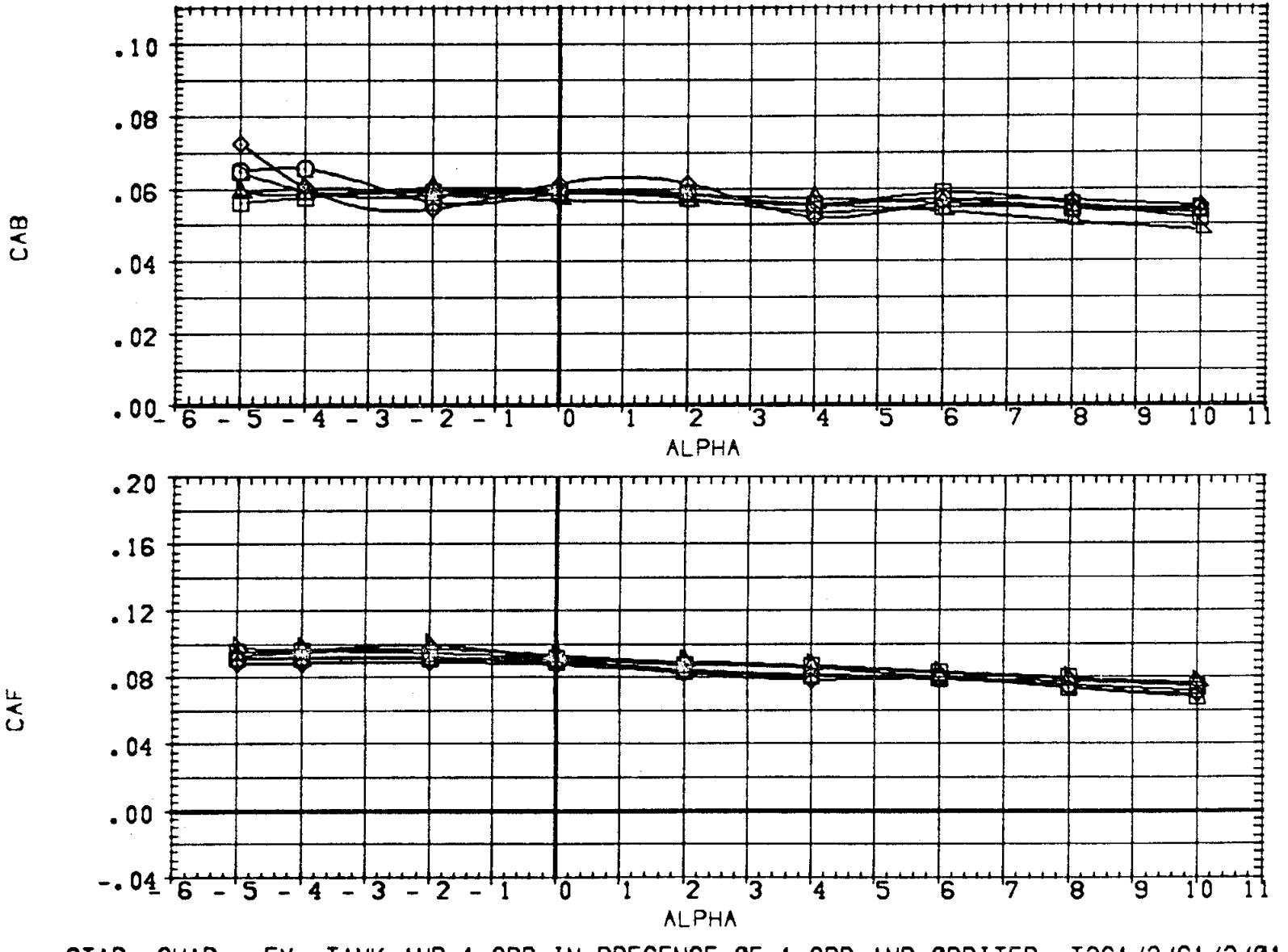


STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

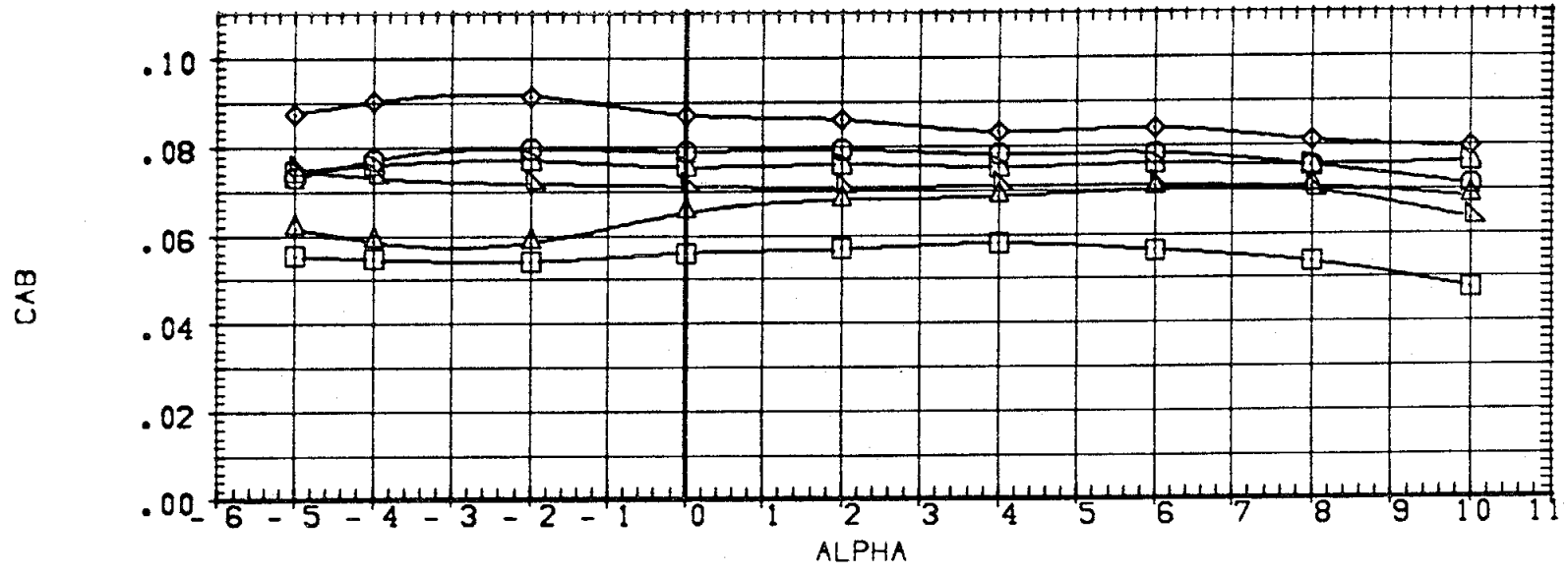


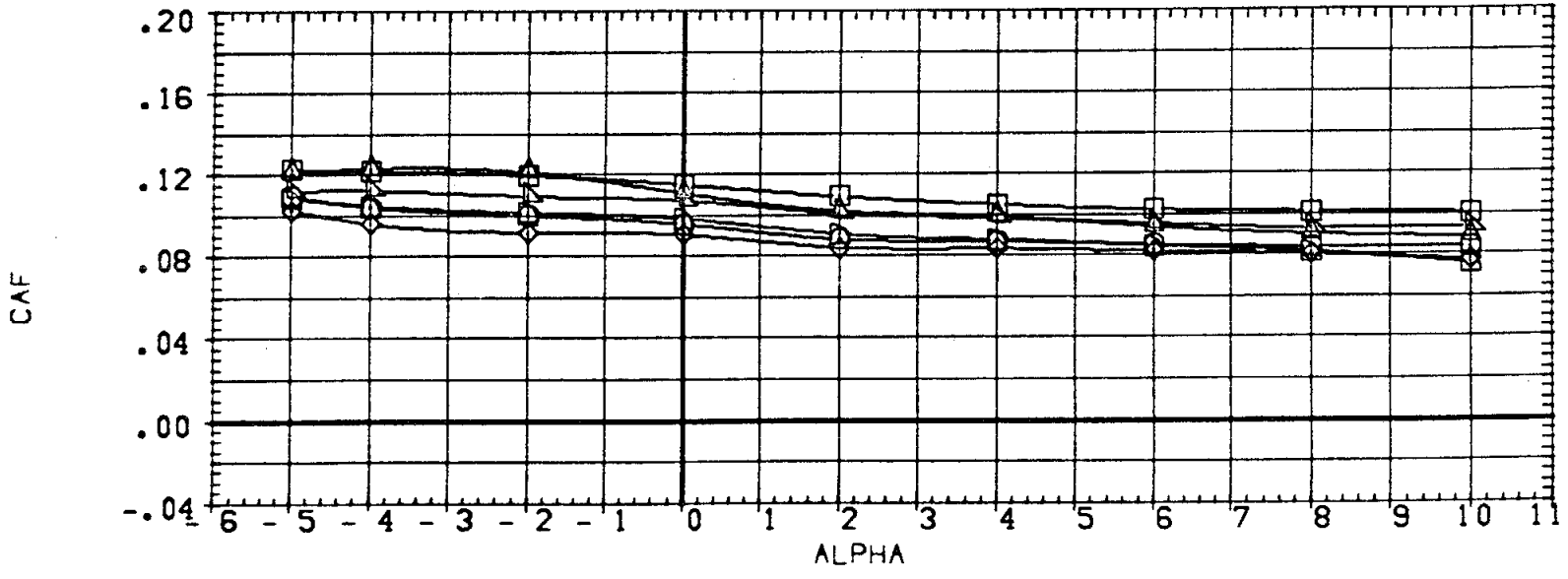
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



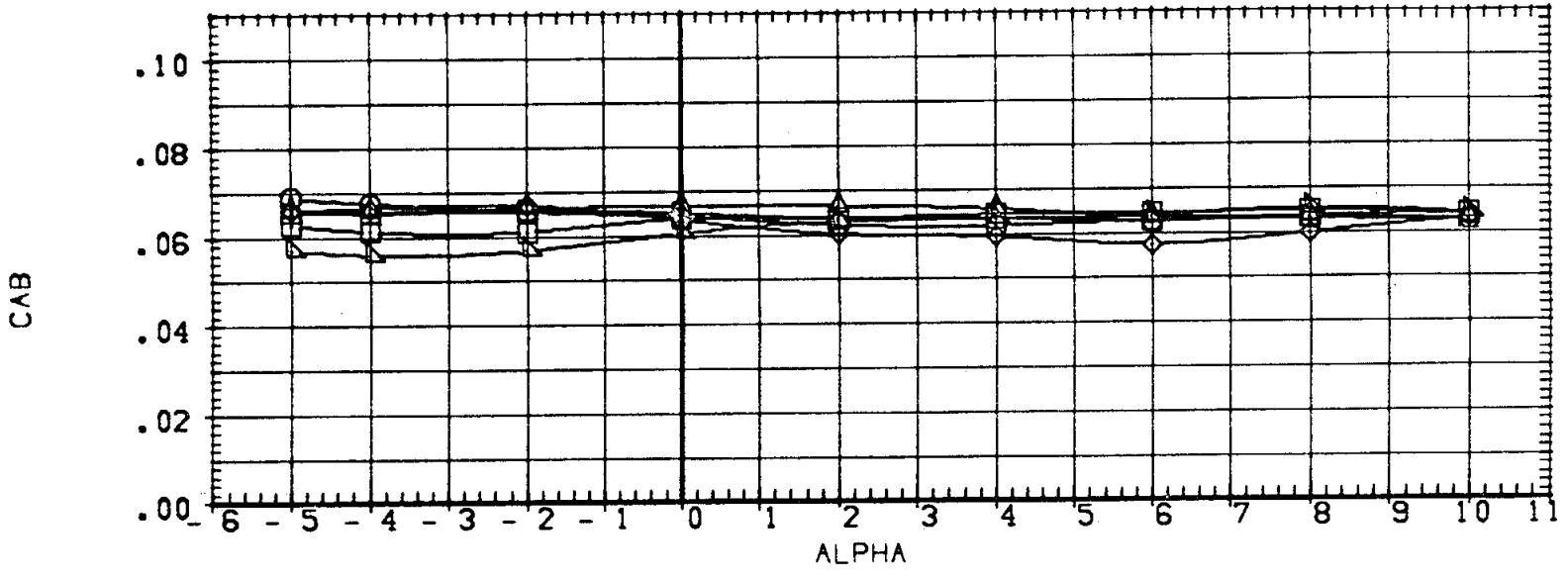


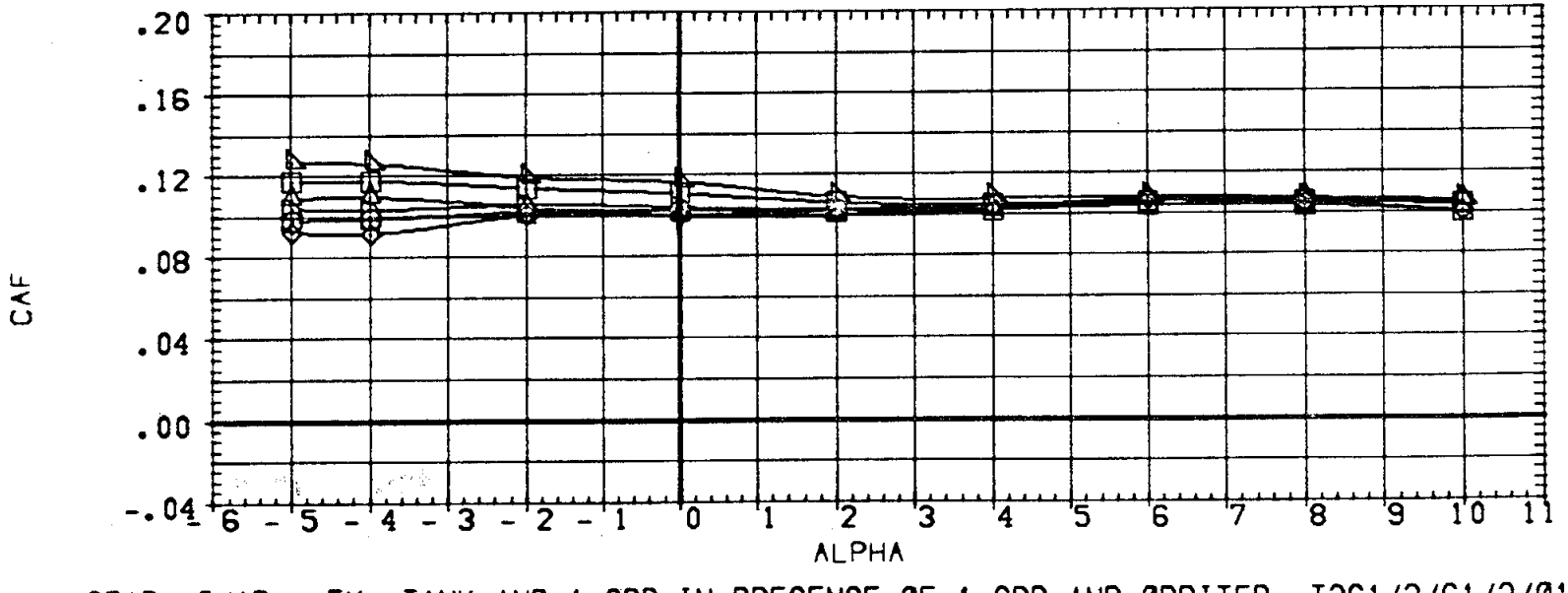
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



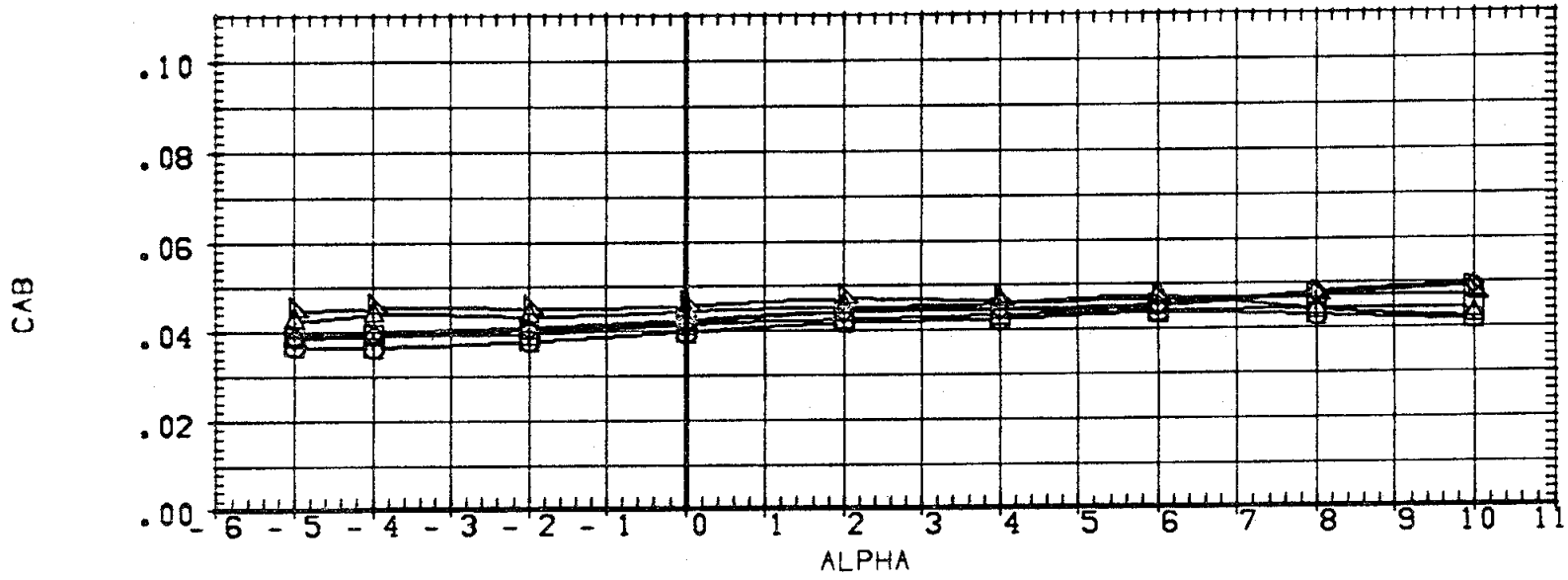


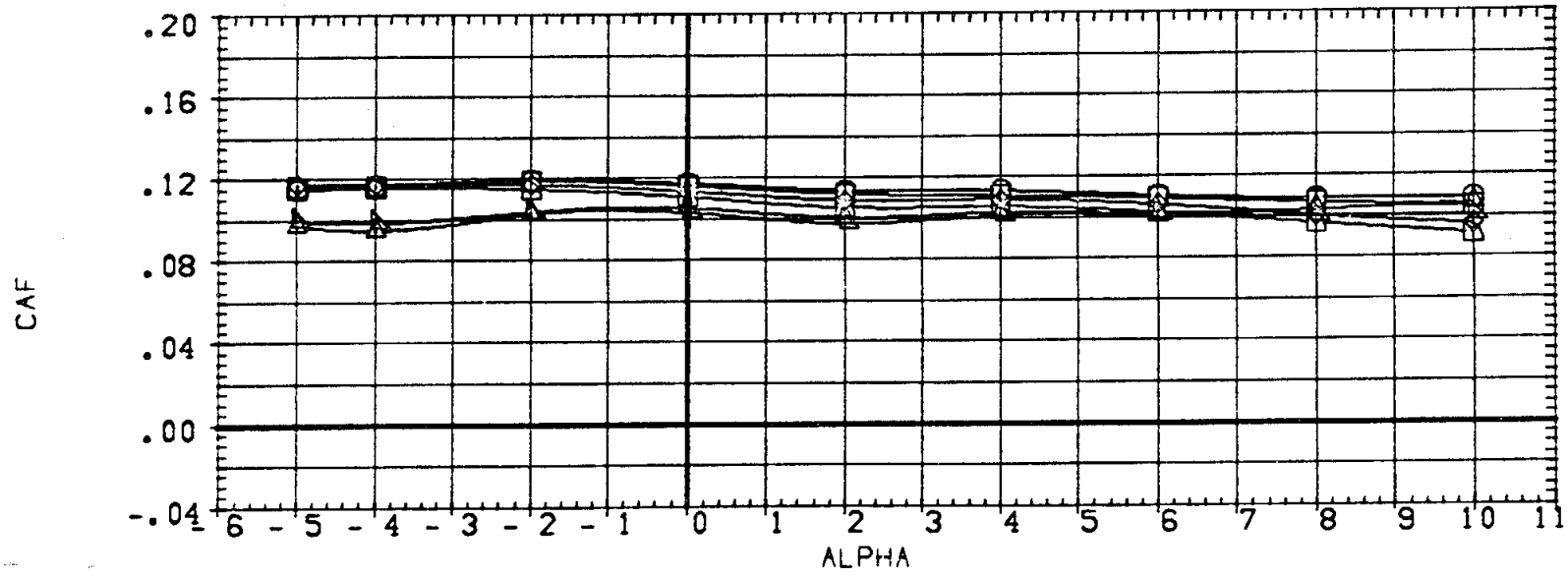
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

(E)MACH = 1.47

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	5220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



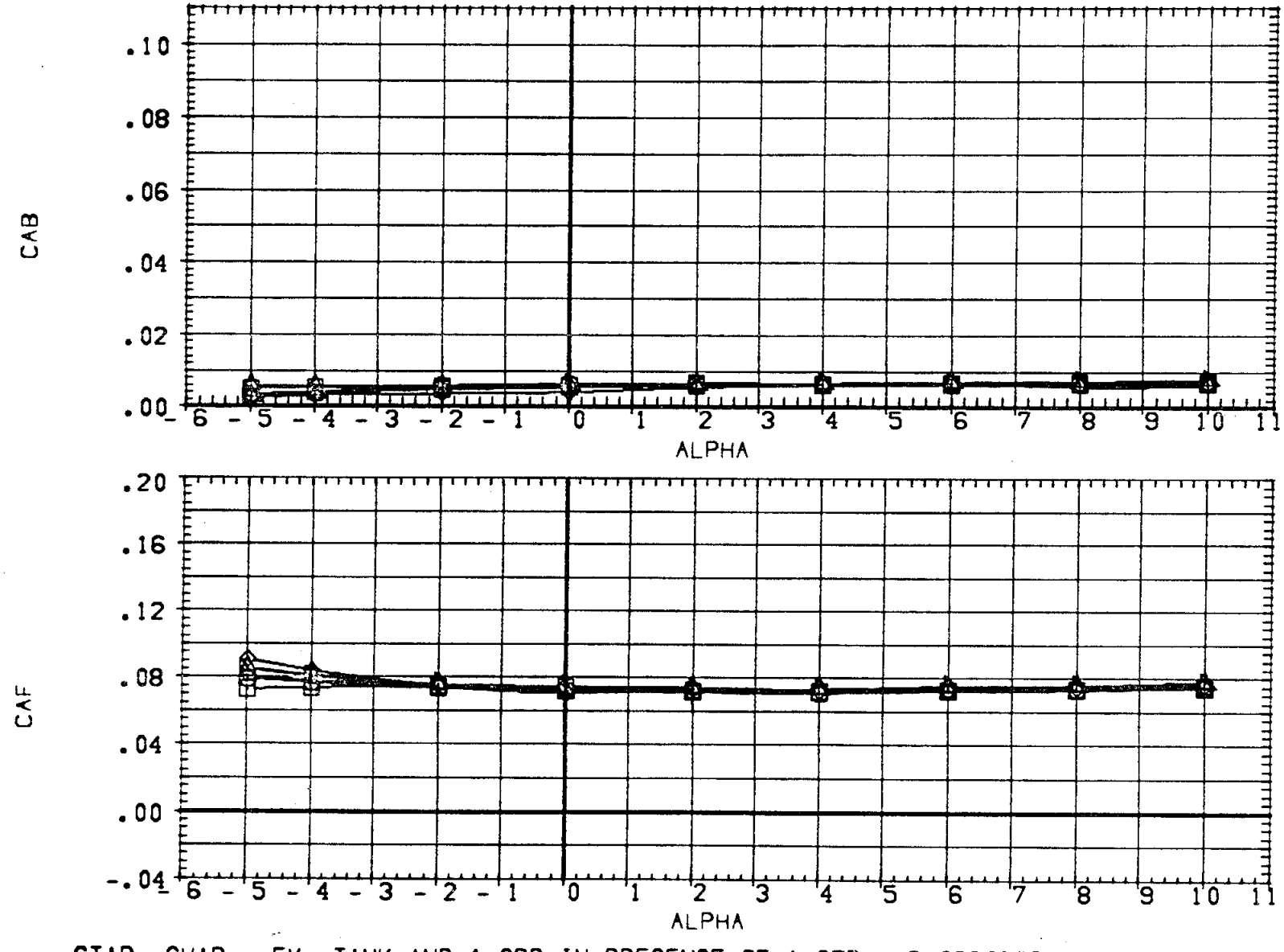


STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

(F)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72136)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(A72137)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(A72138)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(A72139)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(A72140)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(A72141)		MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

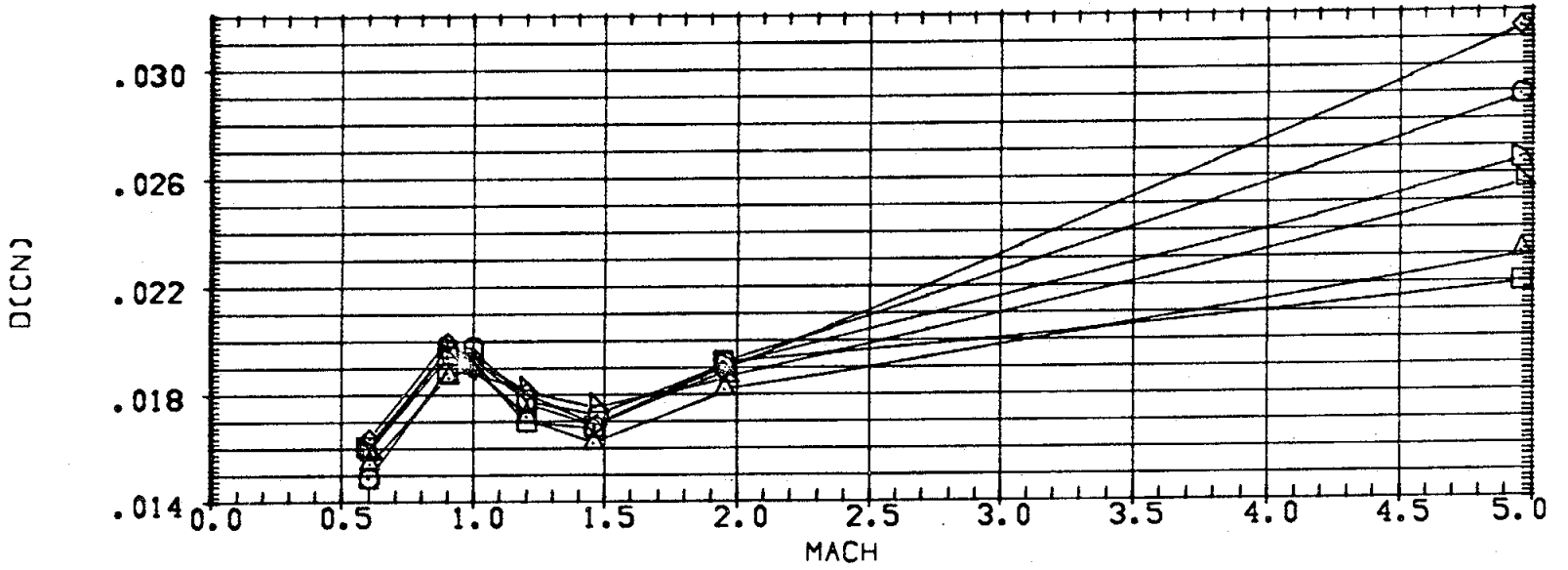


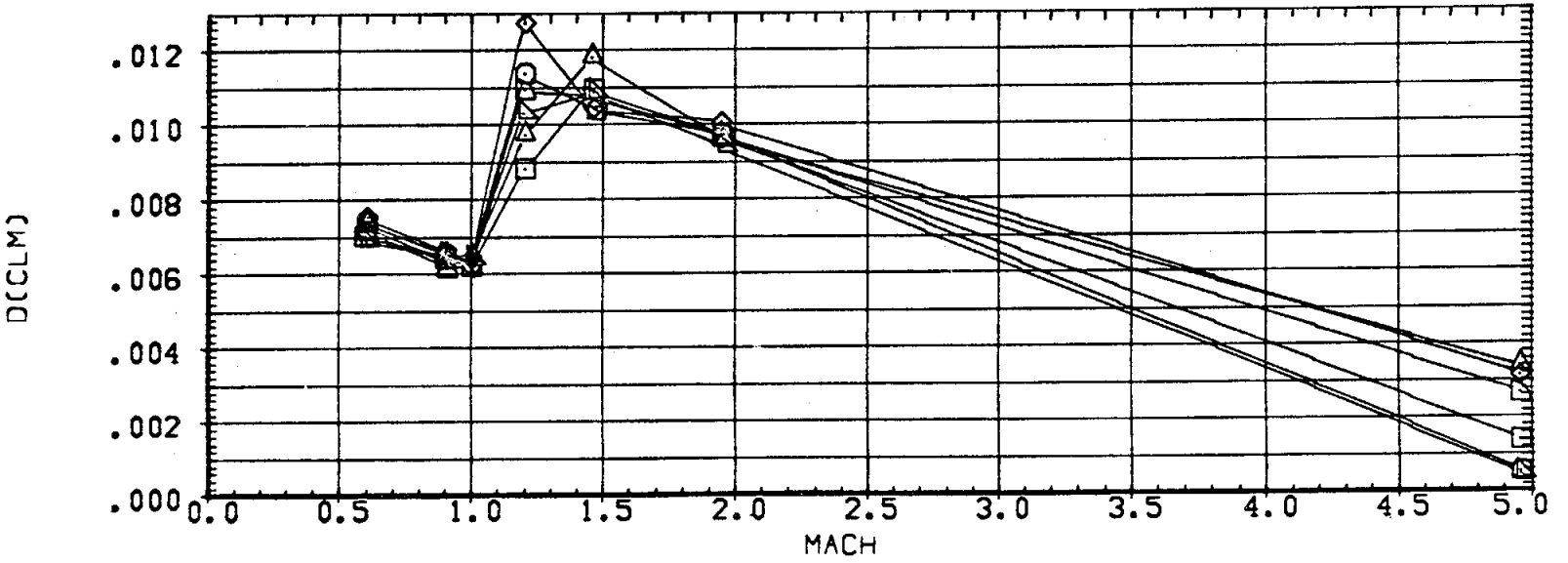
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872136)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	.000	.120	10.000	.000
(872137)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	-1.200	.120	10.000	.000
(872138)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	1.500	.120	10.000	.000
(872139)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	.000	.240	10.000	.000
(872140)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	-1.200	.240	10.000	.000
(872141)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

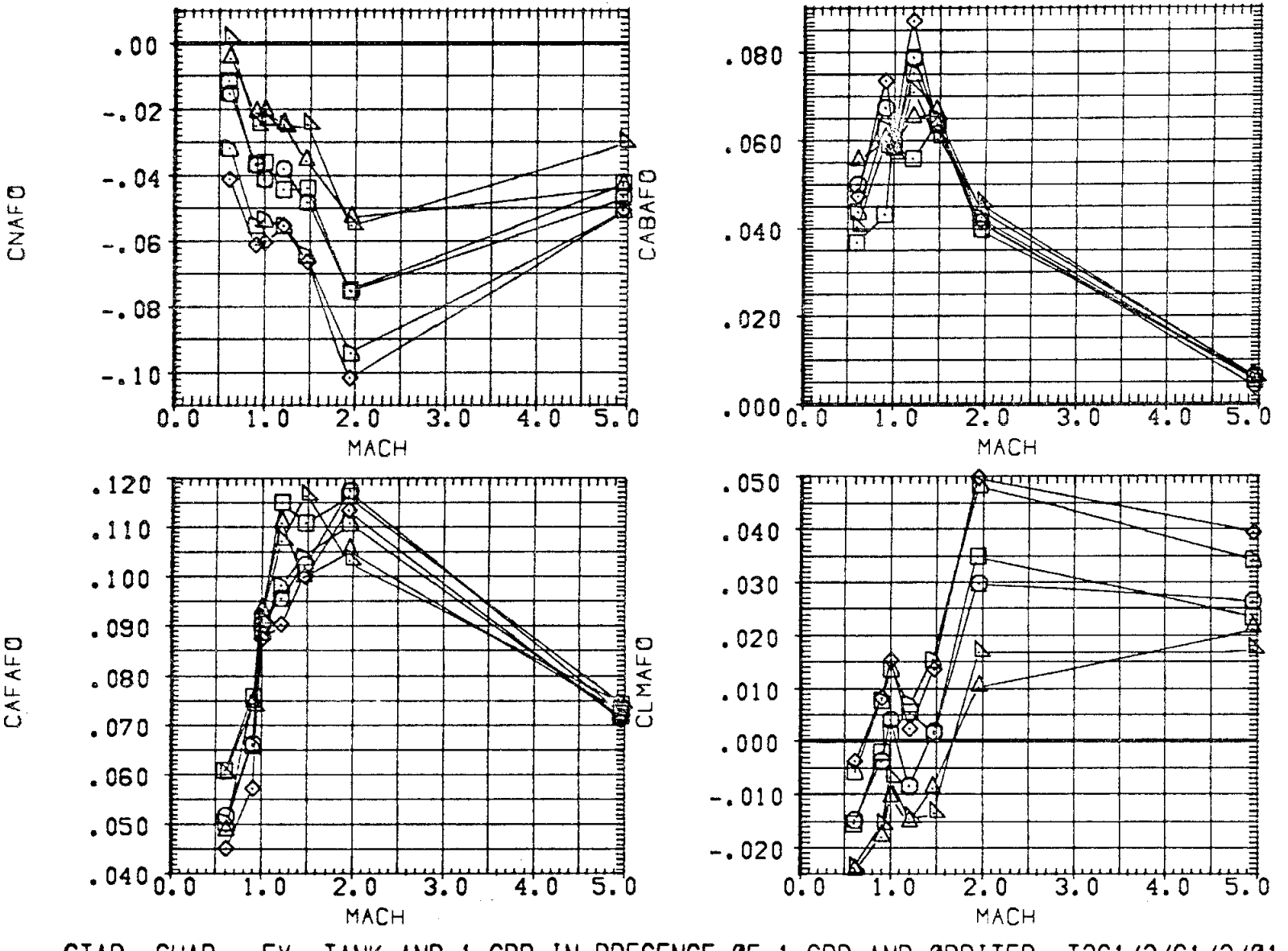




STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872136)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.120	10.000	.000
(872137)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.120	10.000	.000
(872138)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.120	10.000	.000
(872139)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	.000	.240	10.000	.000
(872140)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	-1.200	.240	10.000	.000
(872141)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

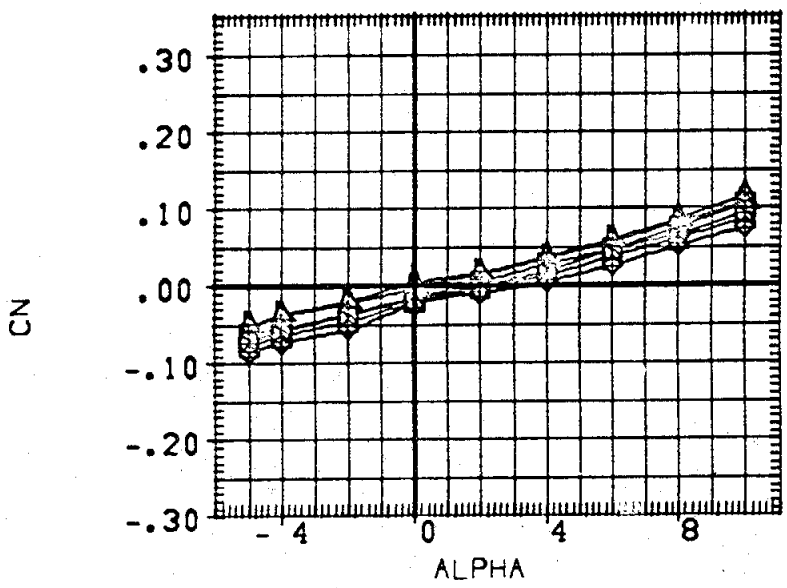


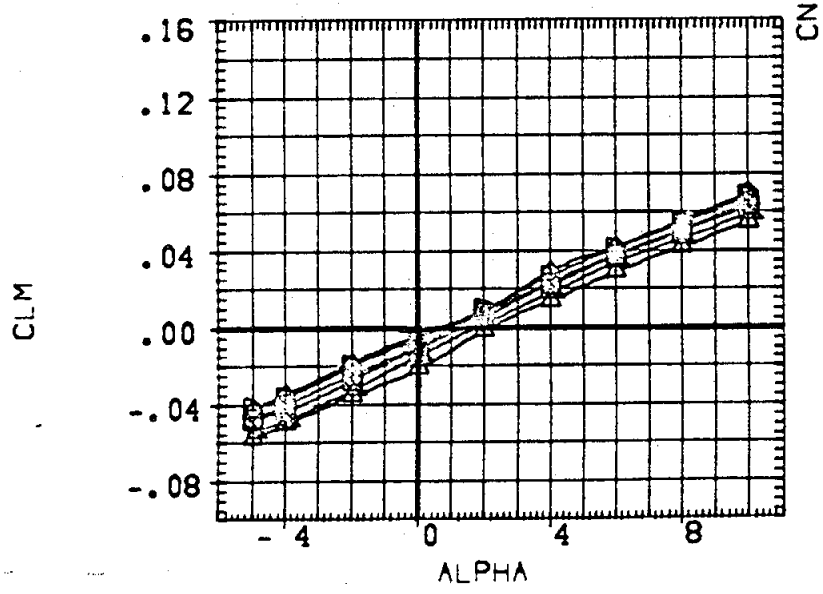
STAB. CHAR - EX. TANK AND 1 SRB IN PRESENCE OF 1 SRB AND ORBITER, T3S1/2/S1/2/01

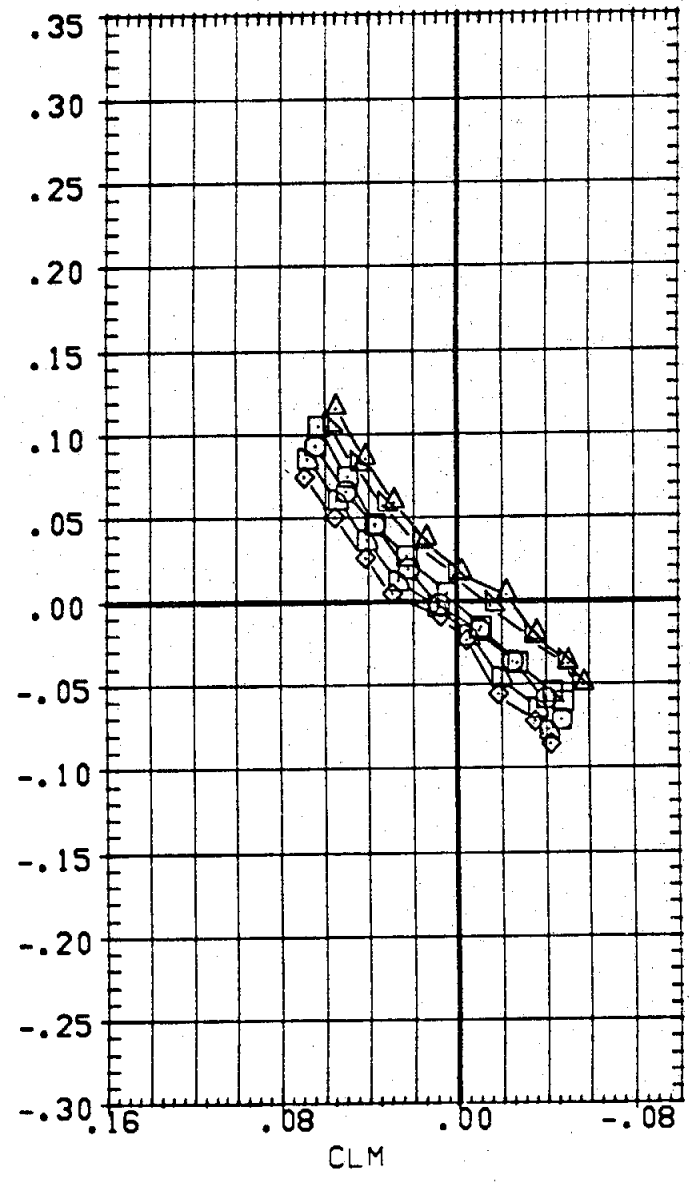
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







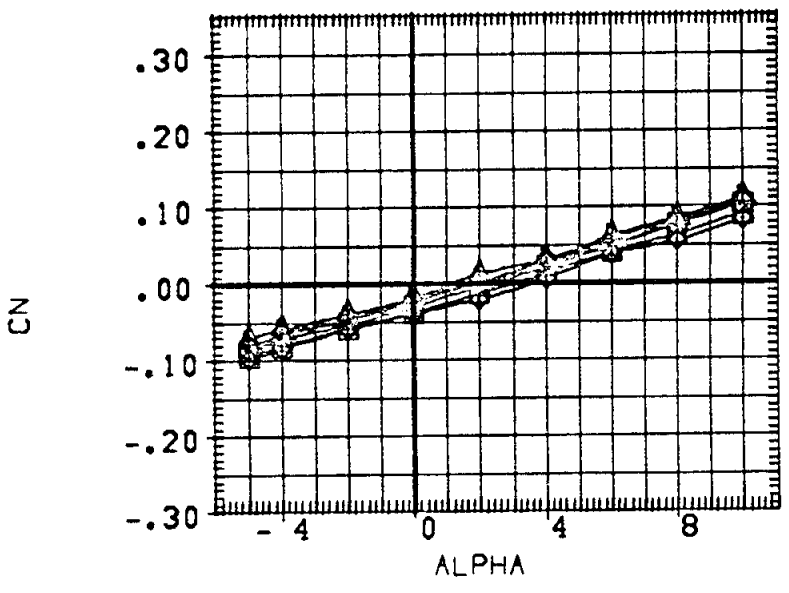
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

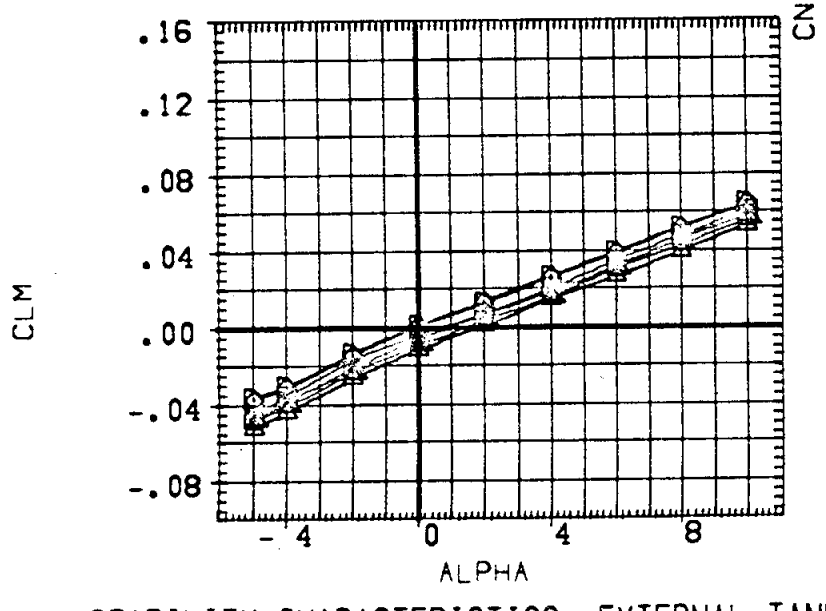
(A)MACH = .60

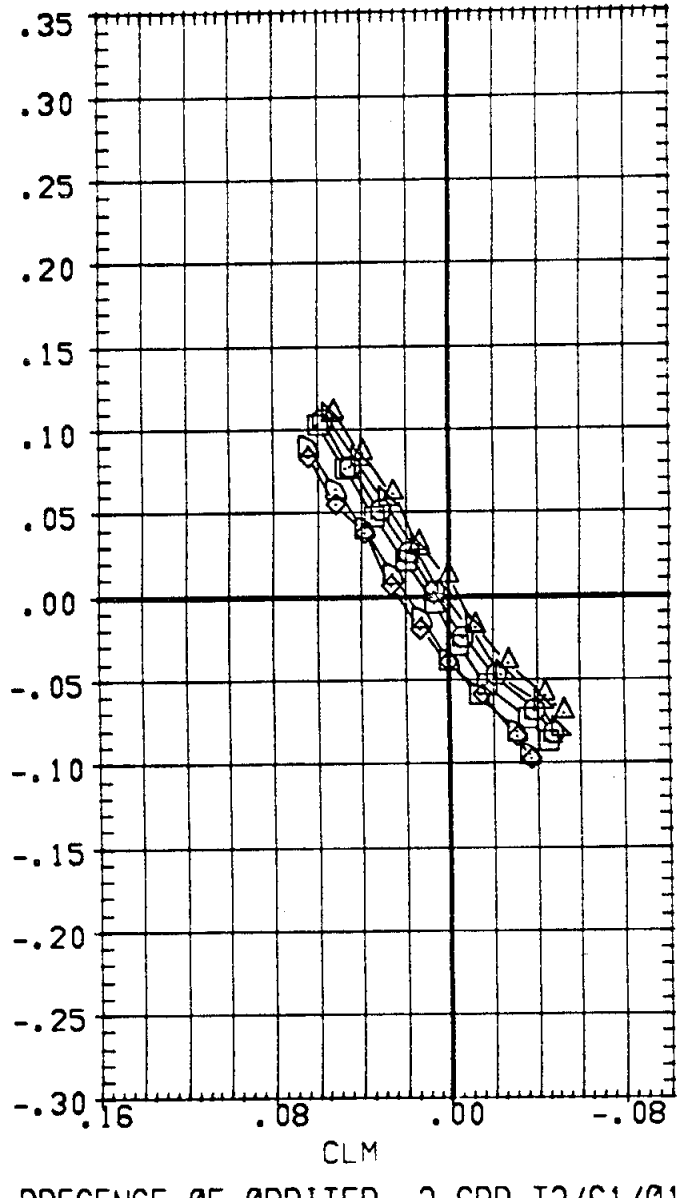
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72115)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72116)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72118)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72119)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72120)	⊗	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







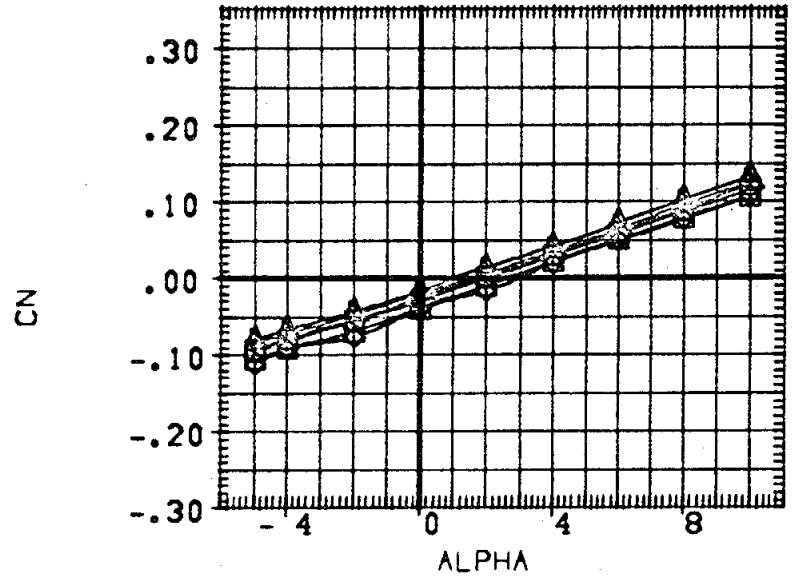
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

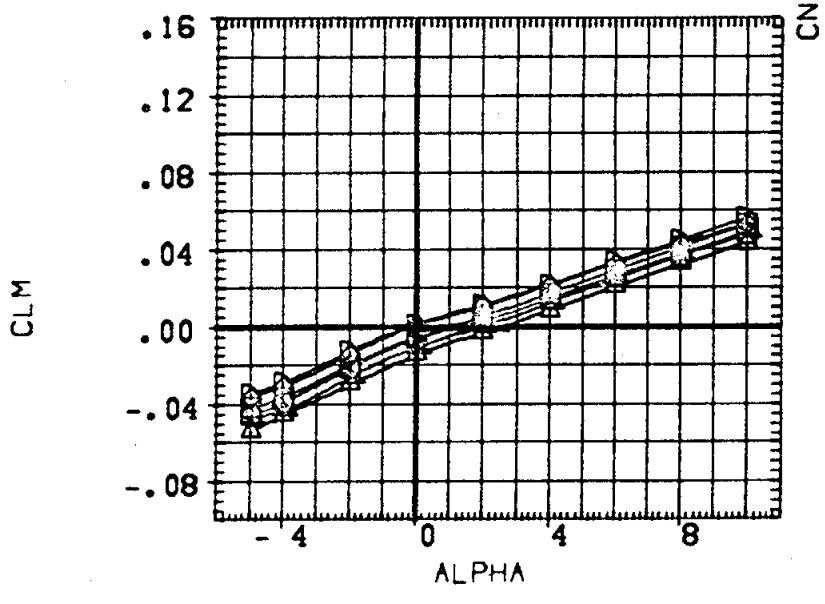
(B)MACH = .80

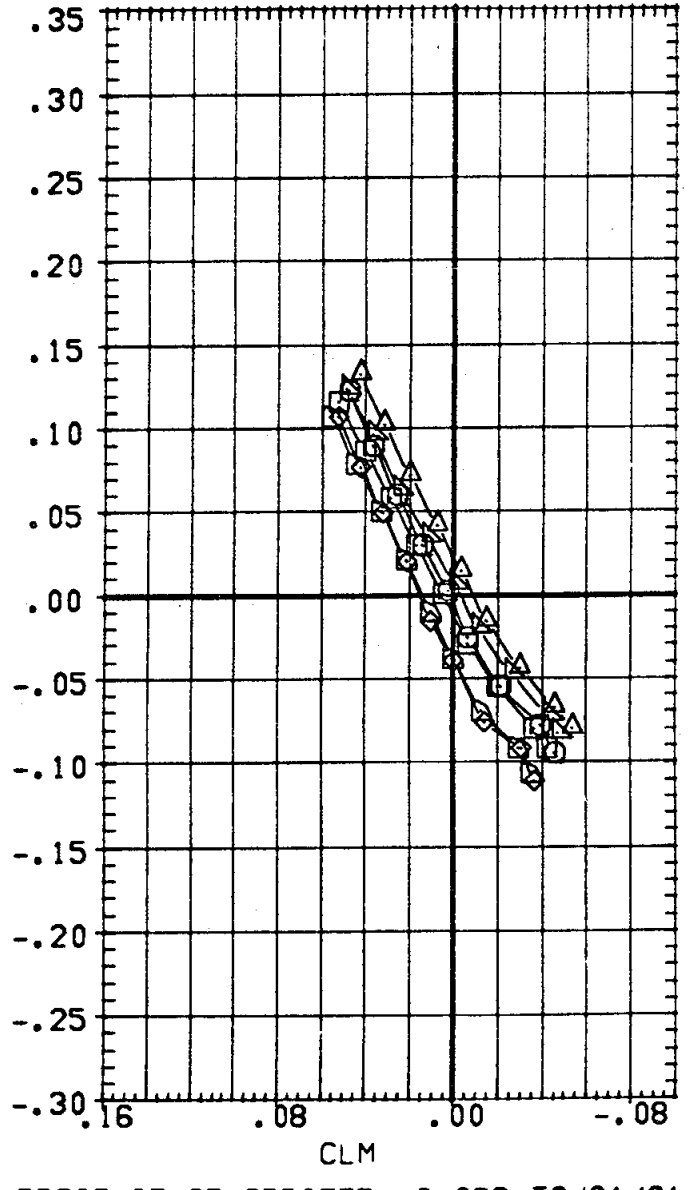
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





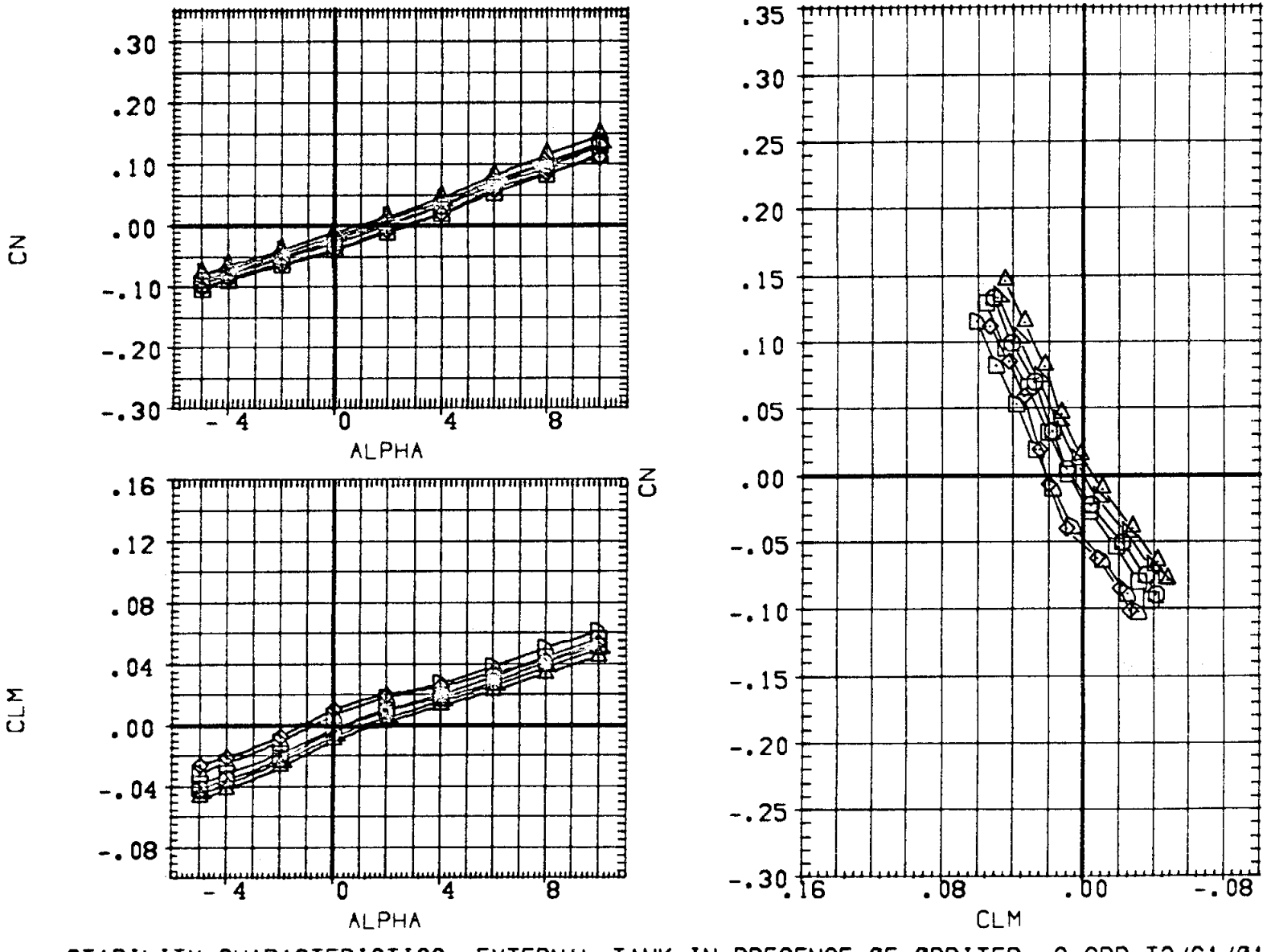


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	.000
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	.000
(A72118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	.000
(A72119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	.000
(A72120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



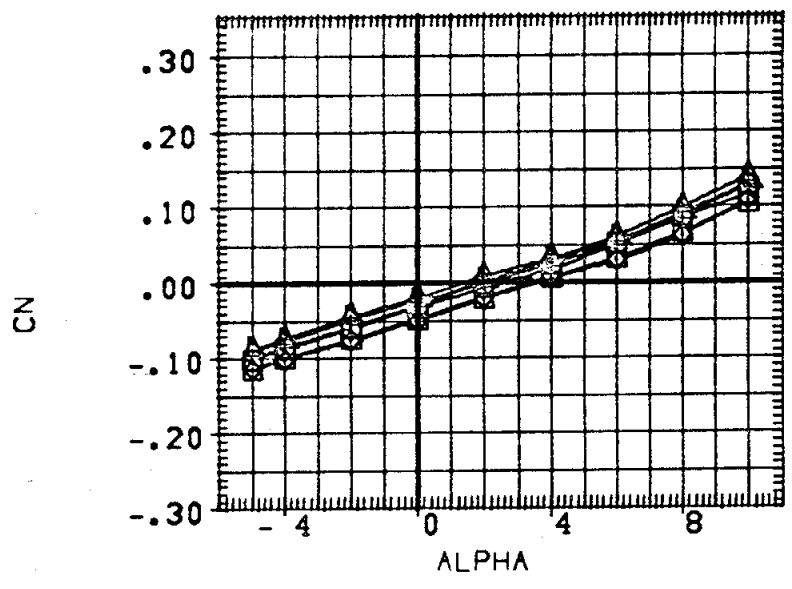
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

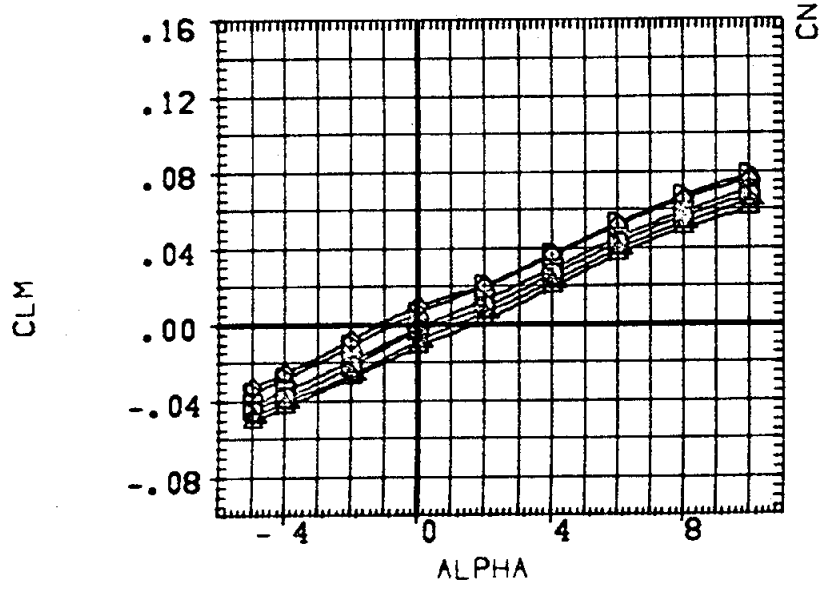
(O)MACH = 1.00

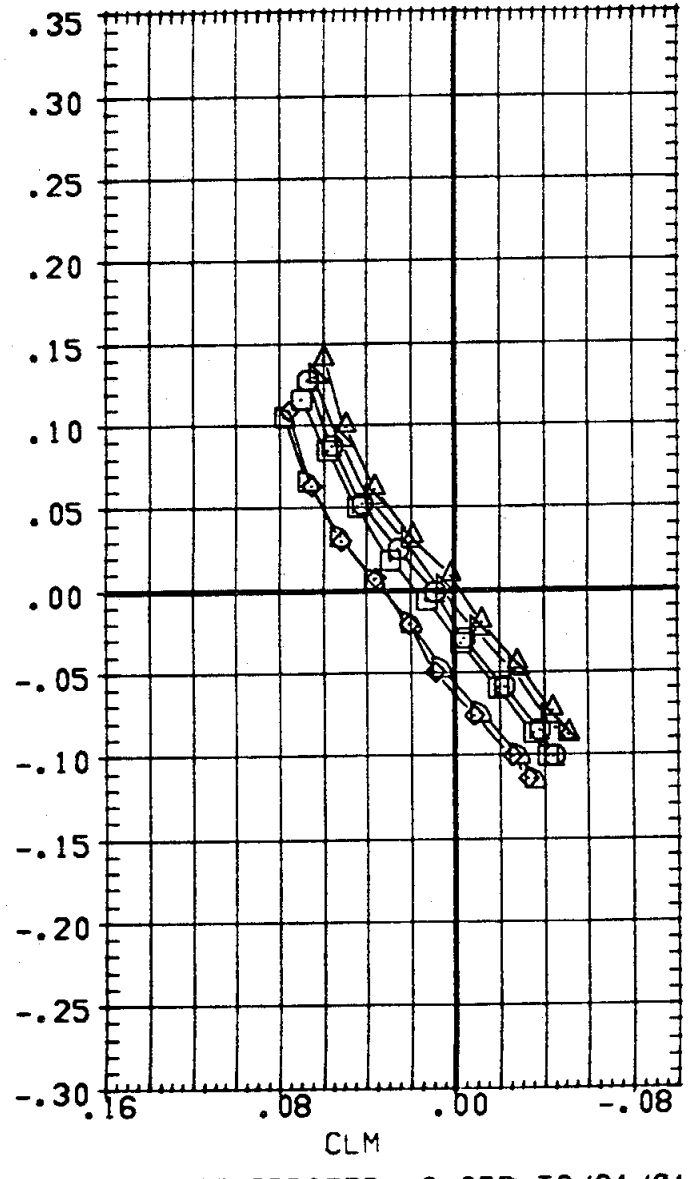
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72115)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(01)
(A72116)	□	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(01)
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(01)
(A72118)	□	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(01)
(A72119)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(01)
(A72120)	□	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





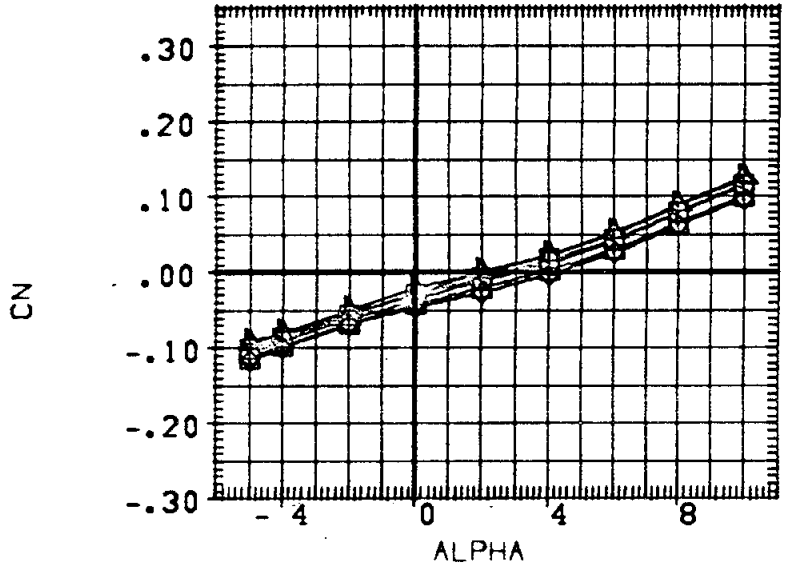


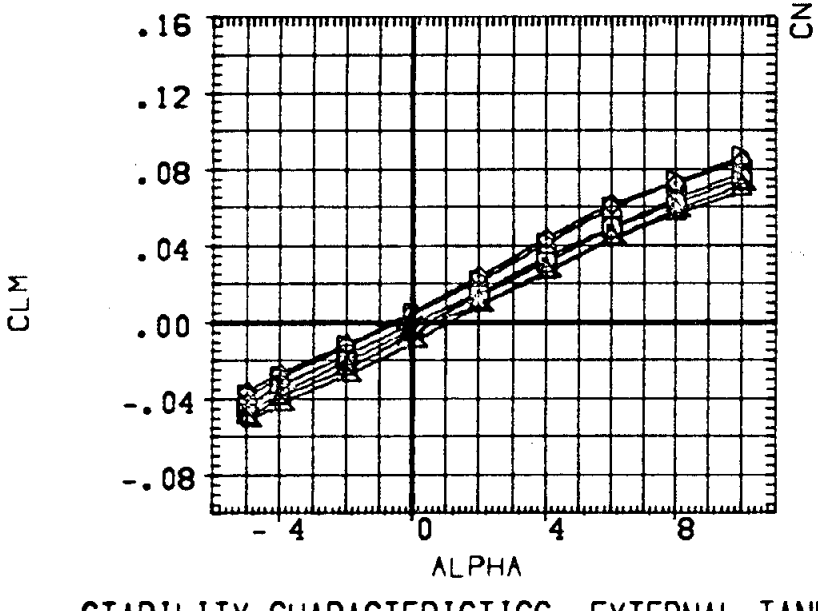
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

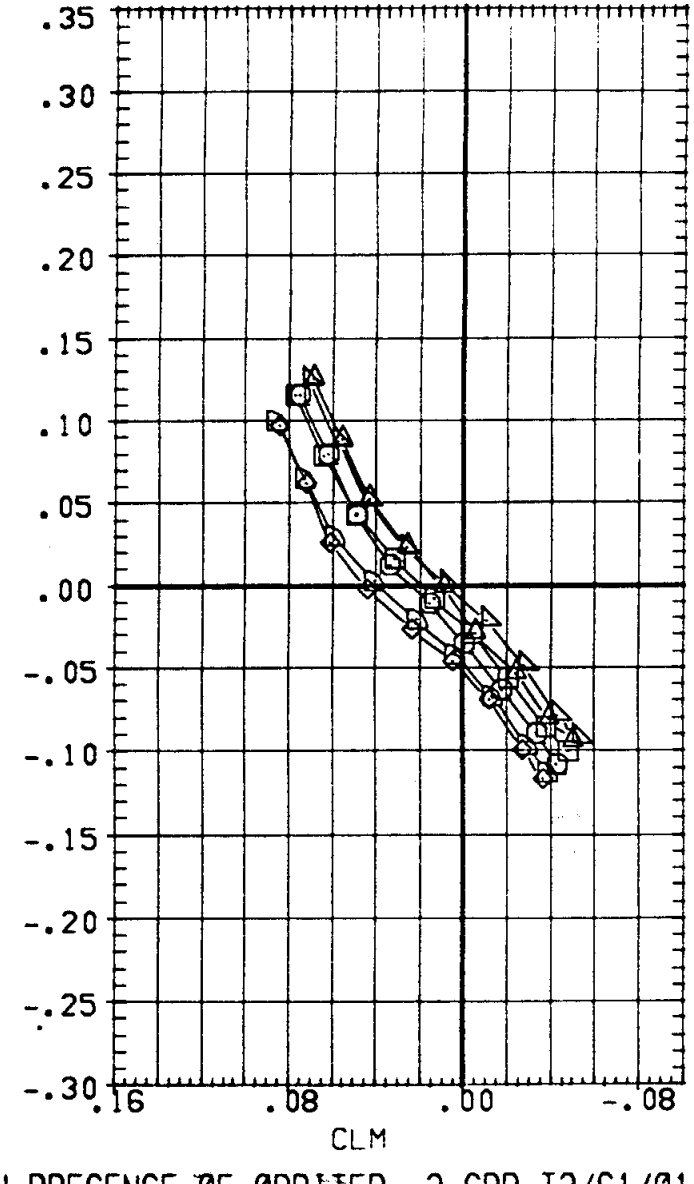
(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2115)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(AY2116)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.120	10.000	.000
(AY2117)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.120	10.000	.000
(AY2118)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.240	10.000	.000
(AY2119)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.240	10.000	.000
(AY2120)	⬡	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







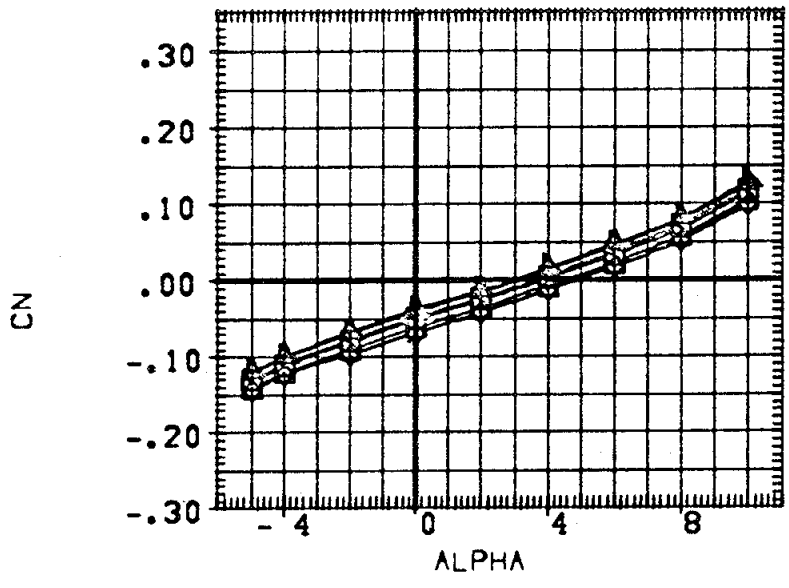
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

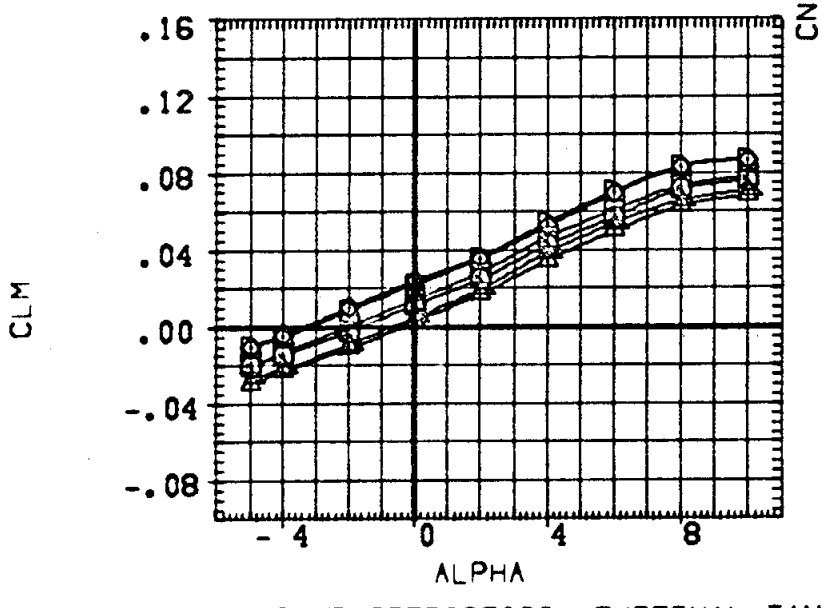
(F)MACH = 1.46

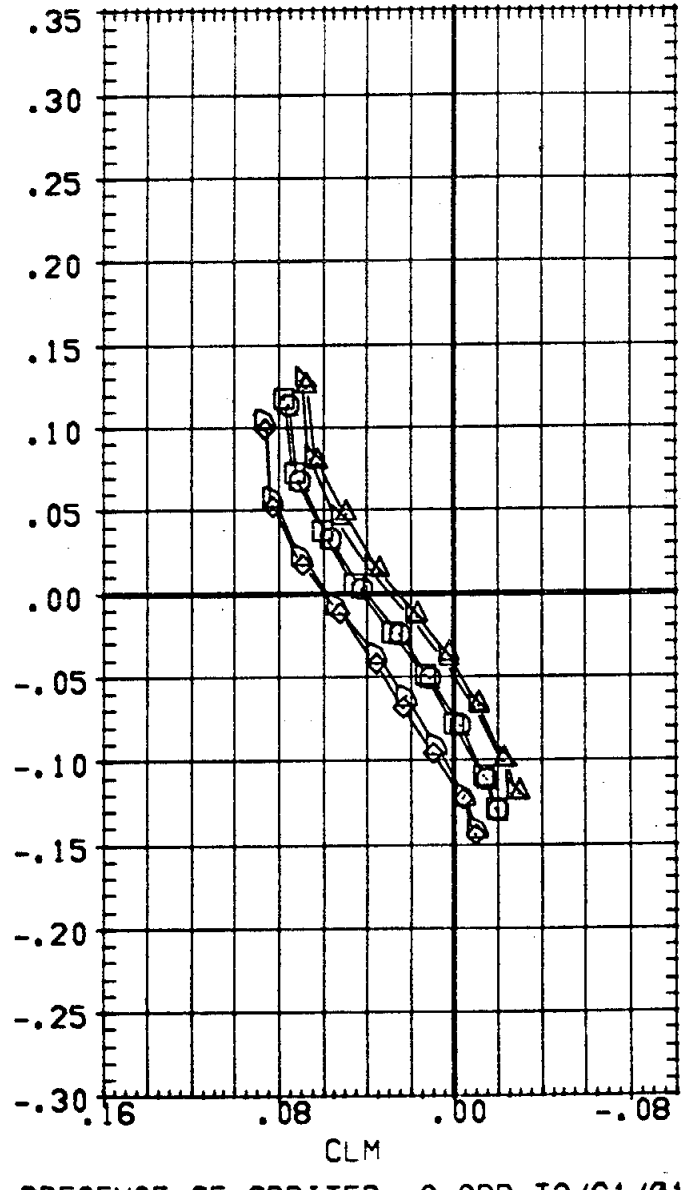
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







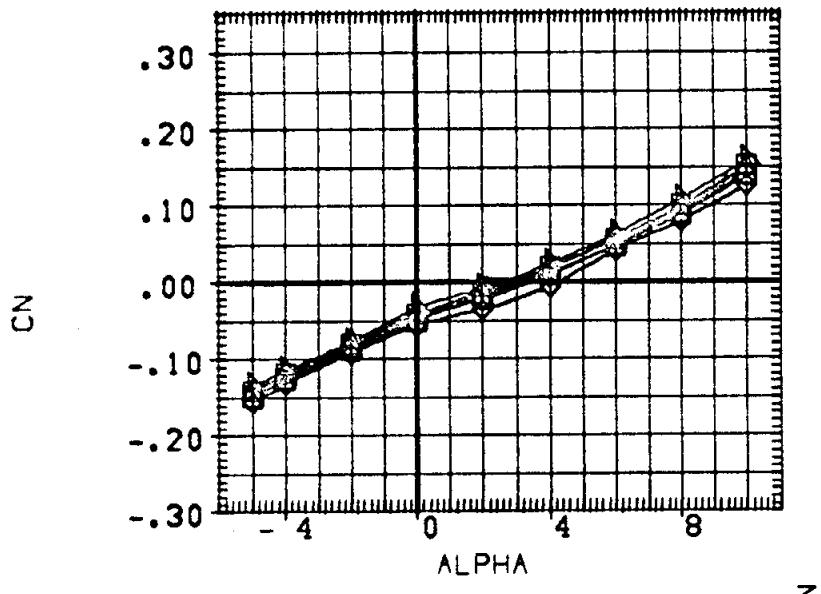
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

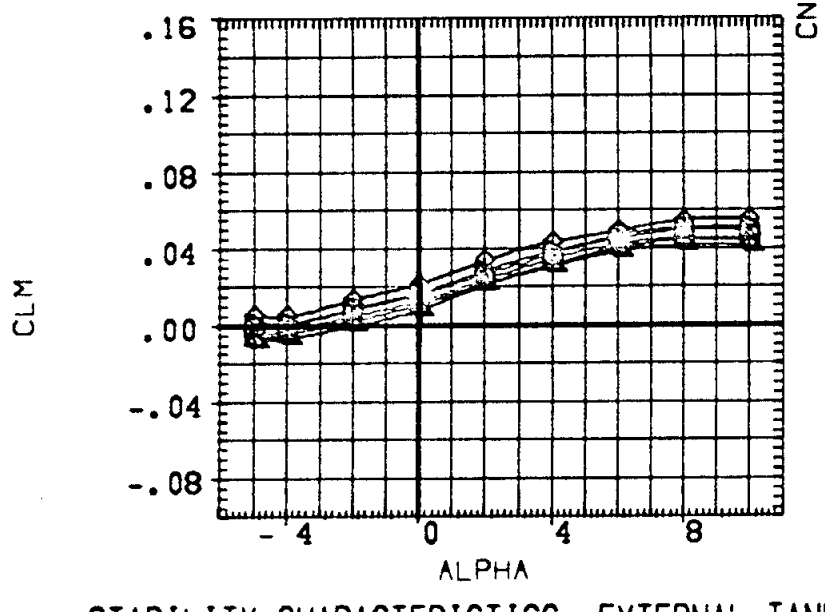
(G)MACH = 1.96

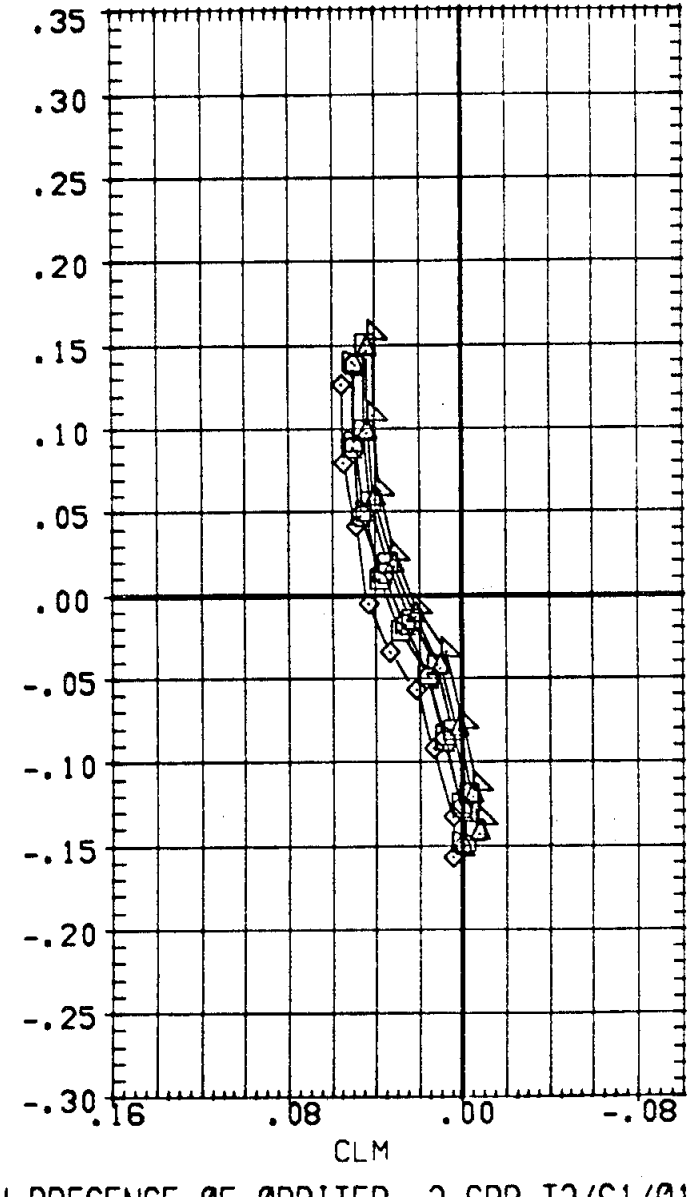
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







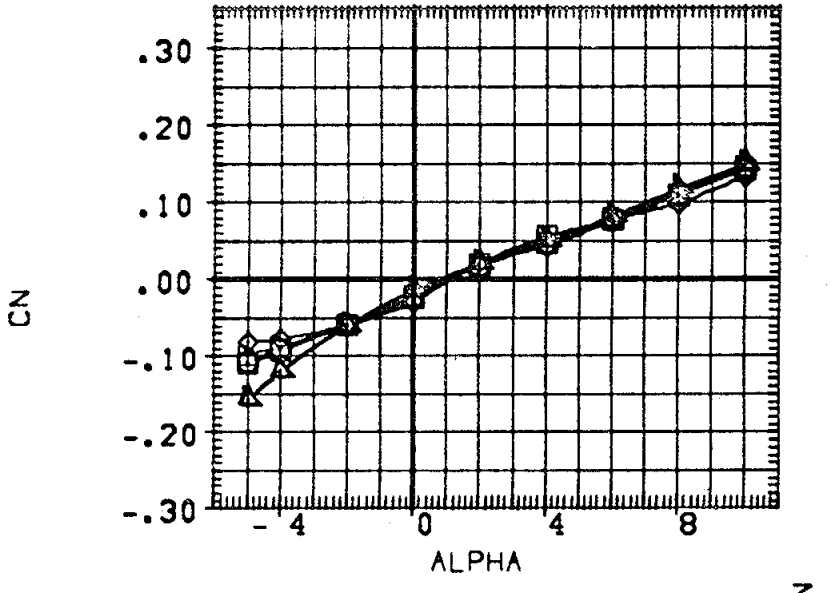
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

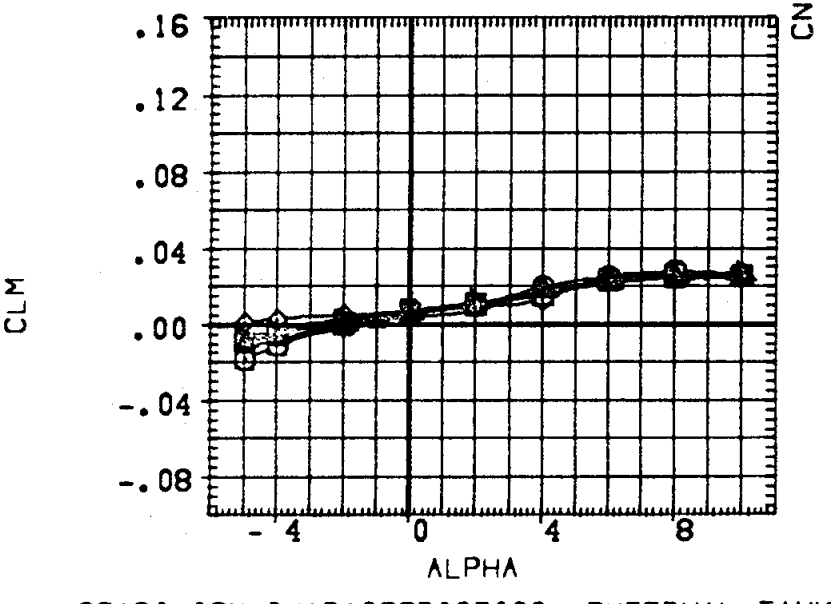
(H)MACH = 2.99

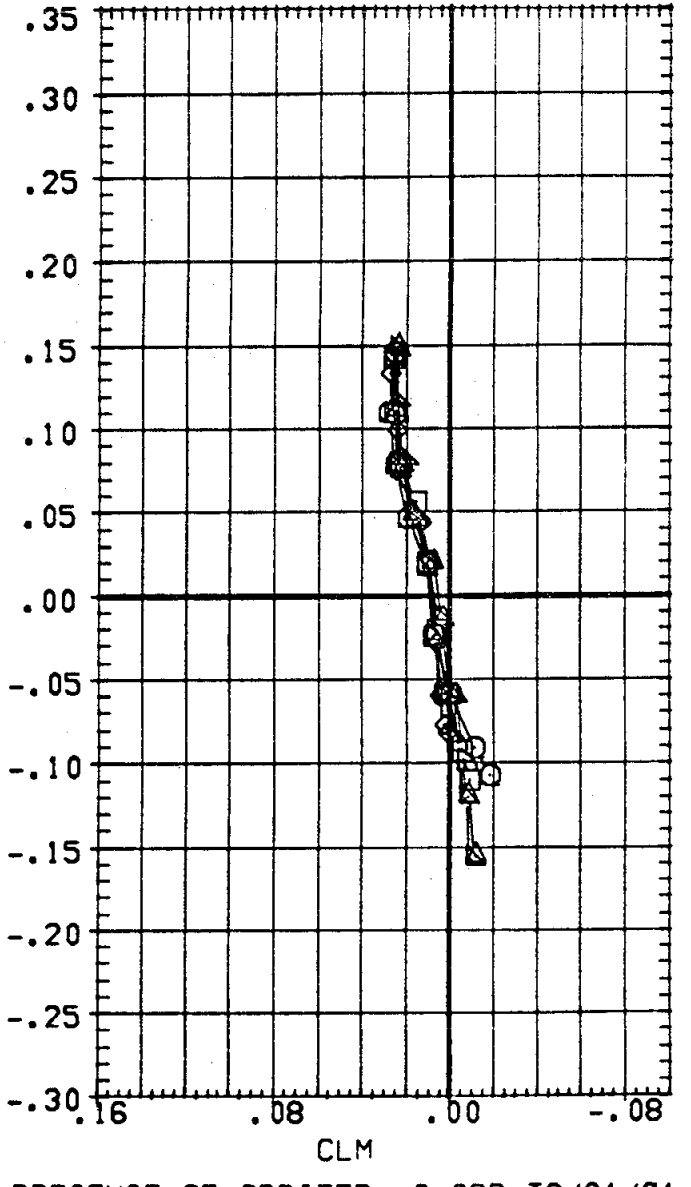
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(AP2115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





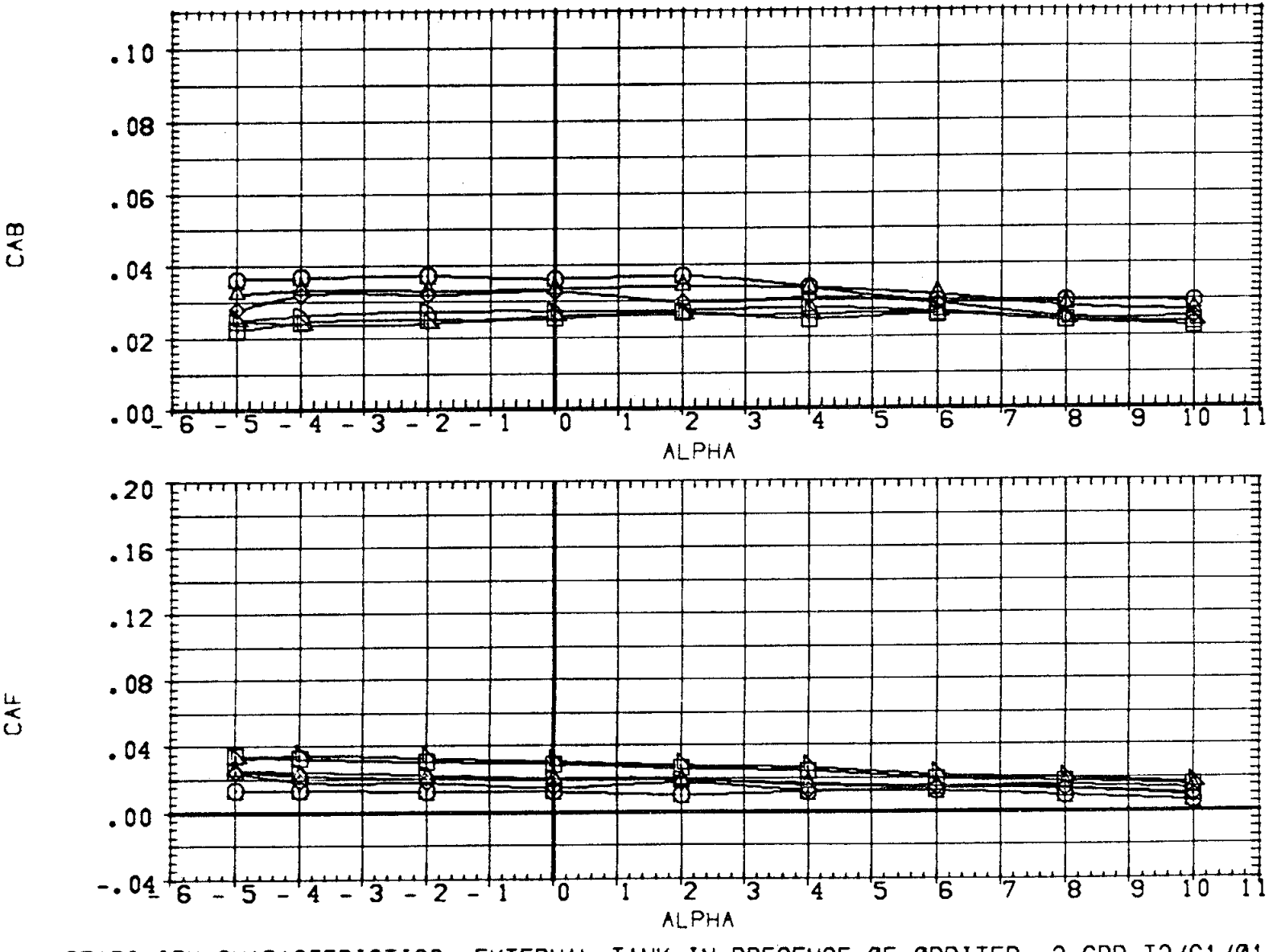


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

( )MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	.000
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	.000
(A72118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	.000
(A72119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	.000
(A72120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



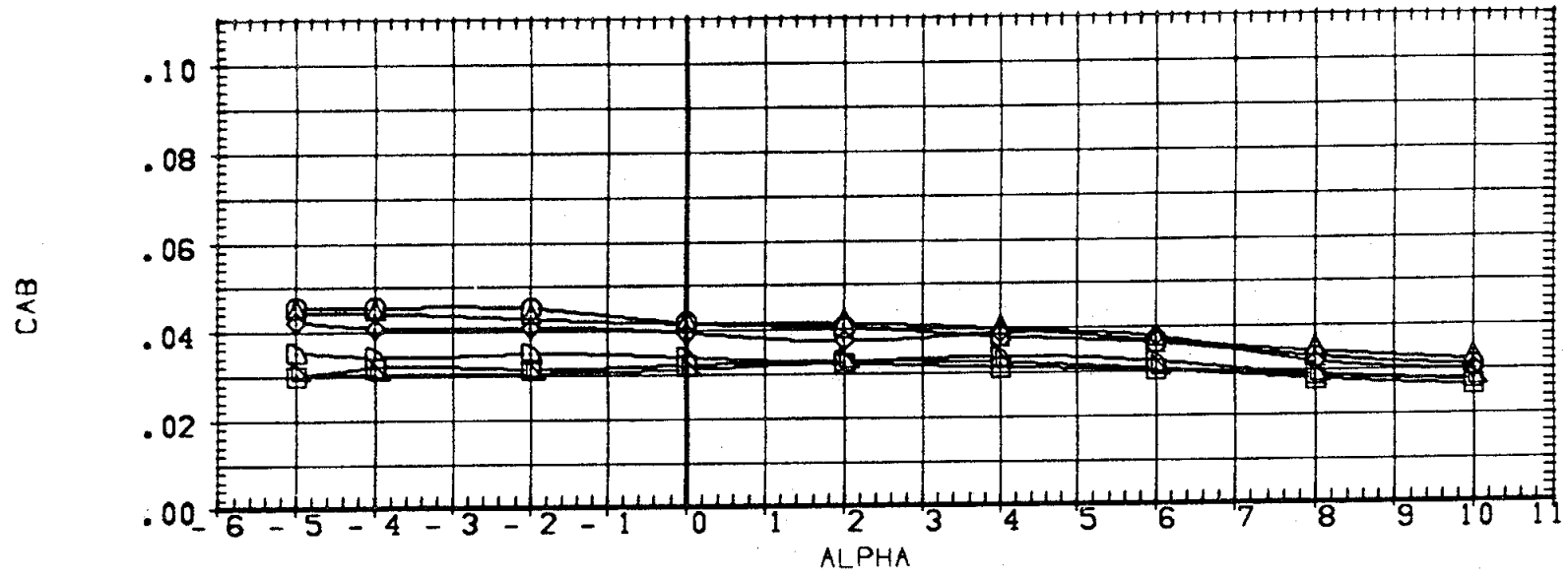
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

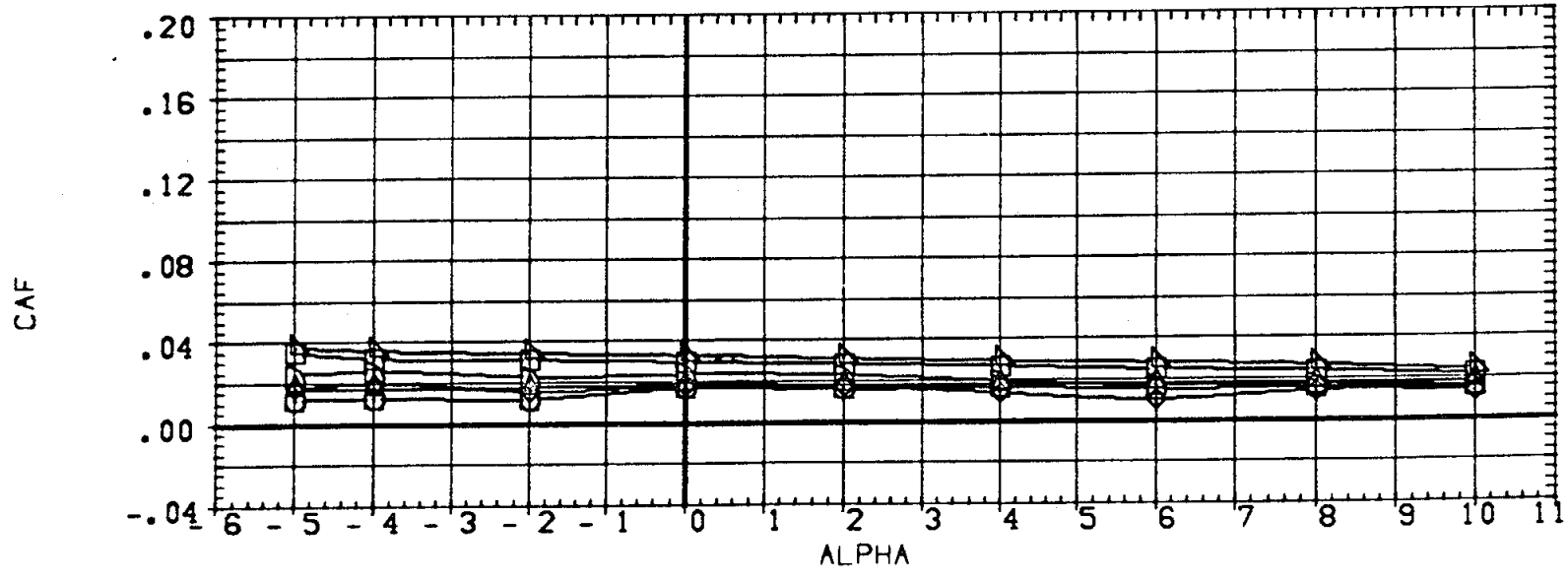
(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.120	10.000	.000
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.120	10.000	.000
(A72118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.240	10.000	.000
(A72119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.240	10.000	.000
(A72120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.240	10.000	.000

DARCAD

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



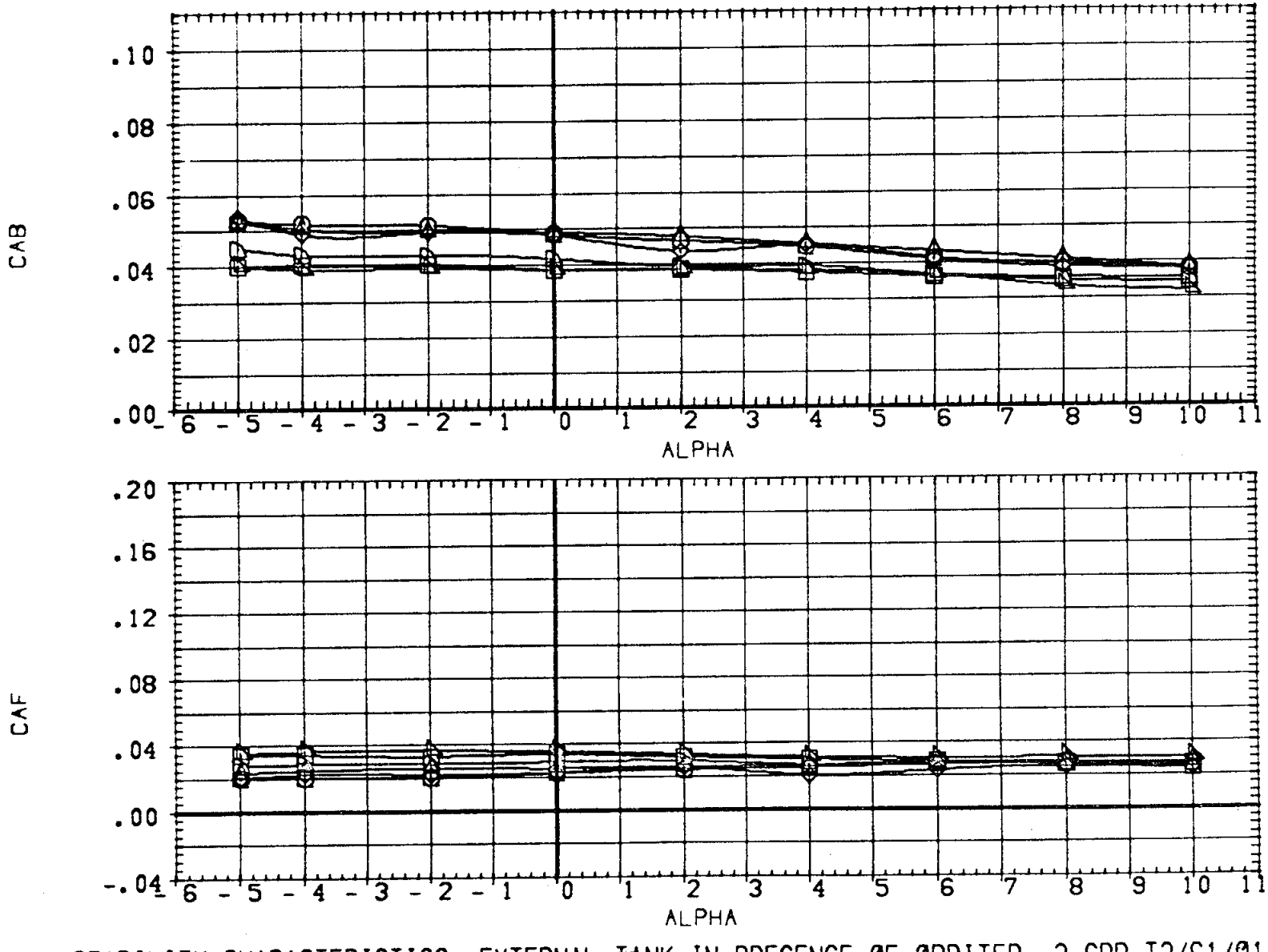


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72116)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	.000
(A72117)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	.000
(A72118)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	.000
(A72119)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	.000
(A72120)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

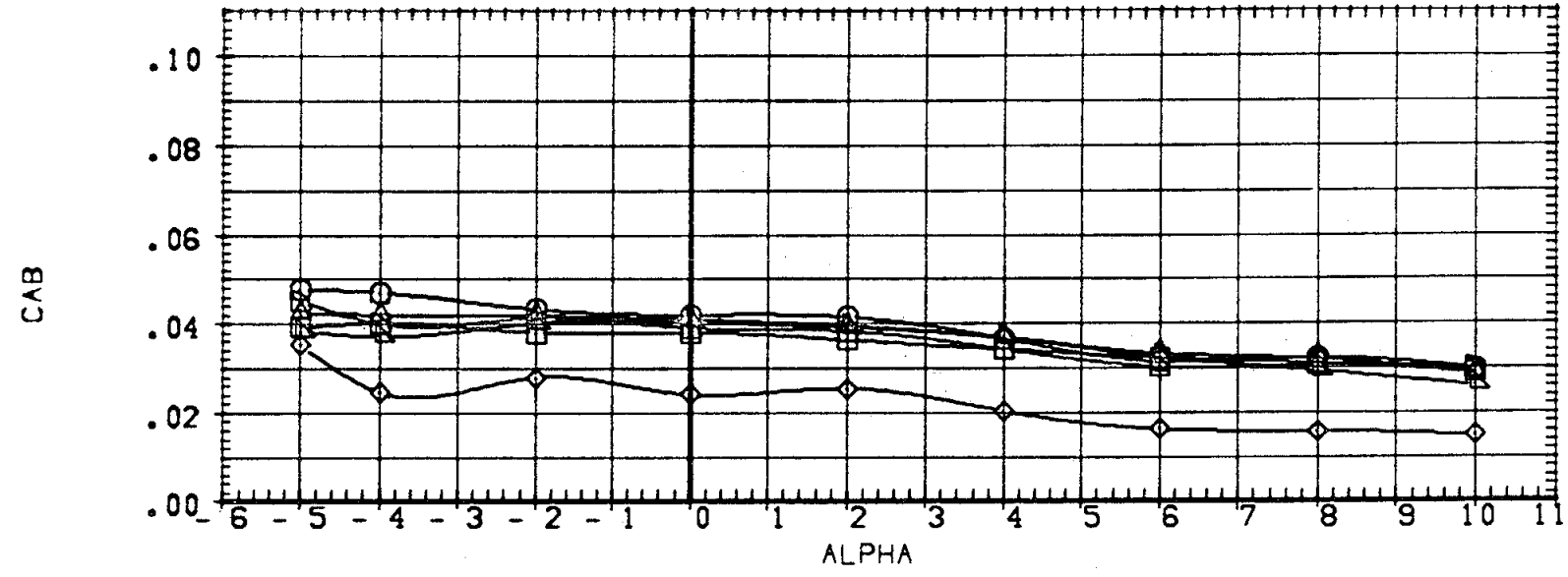


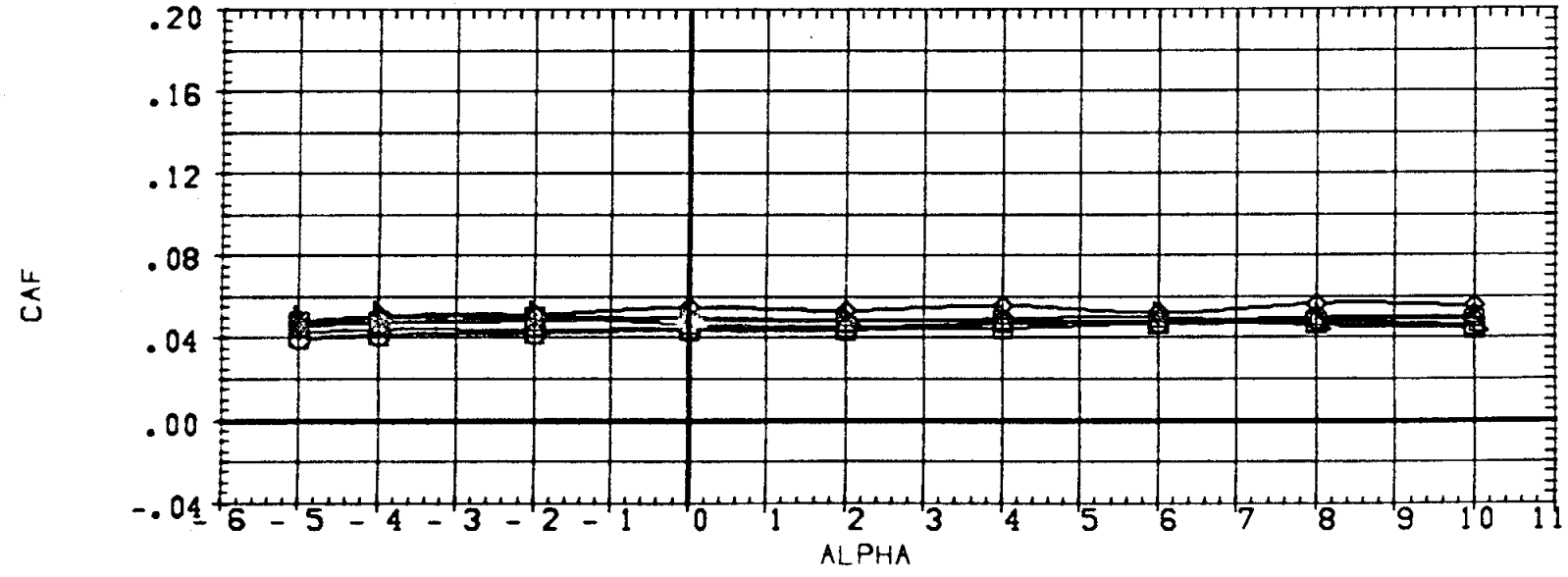
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.120	10.000	.000
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.120	10.000	.000
(A72118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.240	10.000	.000
(A72119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.240	10.000	.000
(A72120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



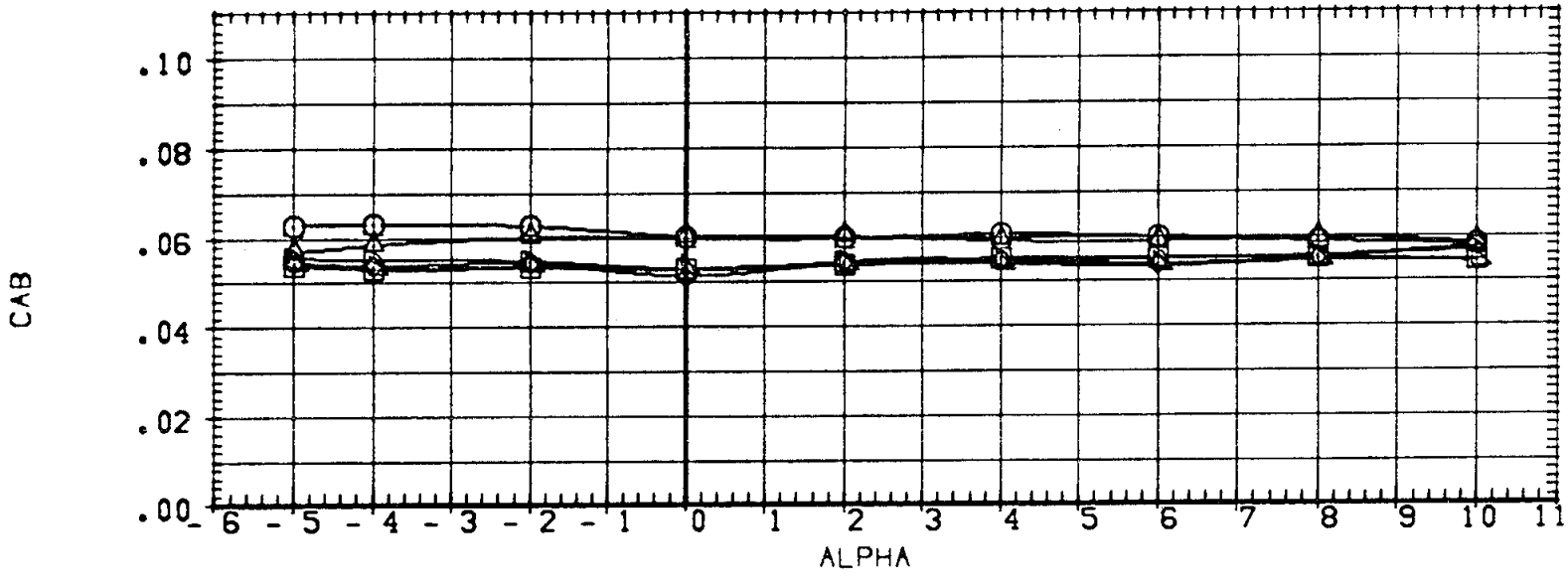


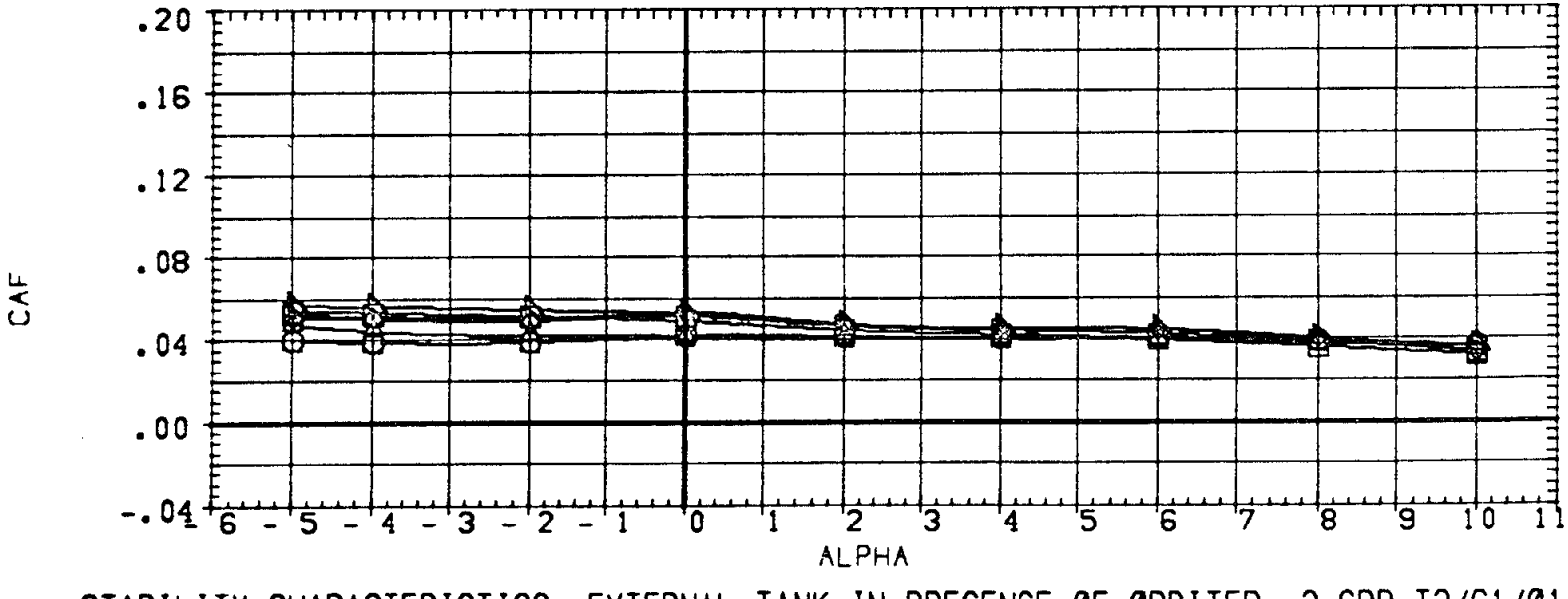
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(D)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72116)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	.000
(A72117)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	.000
(A72118)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	.000
(A72119)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	.000
(A72120)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



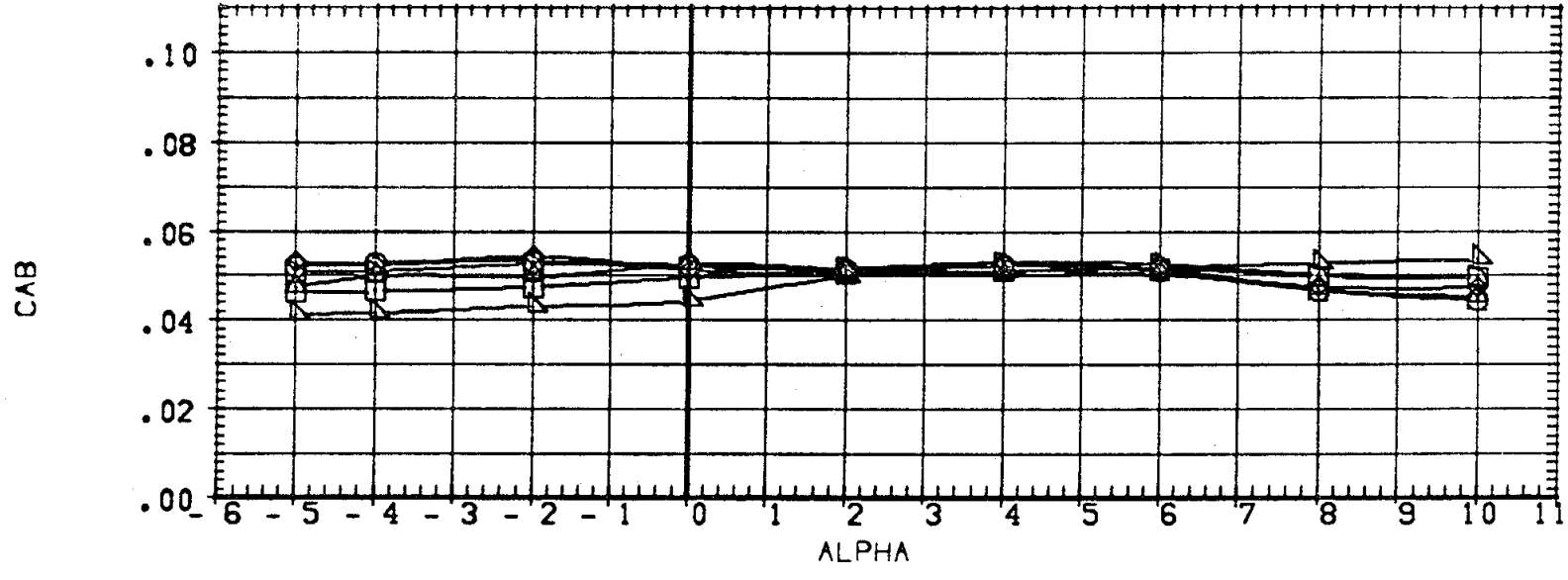


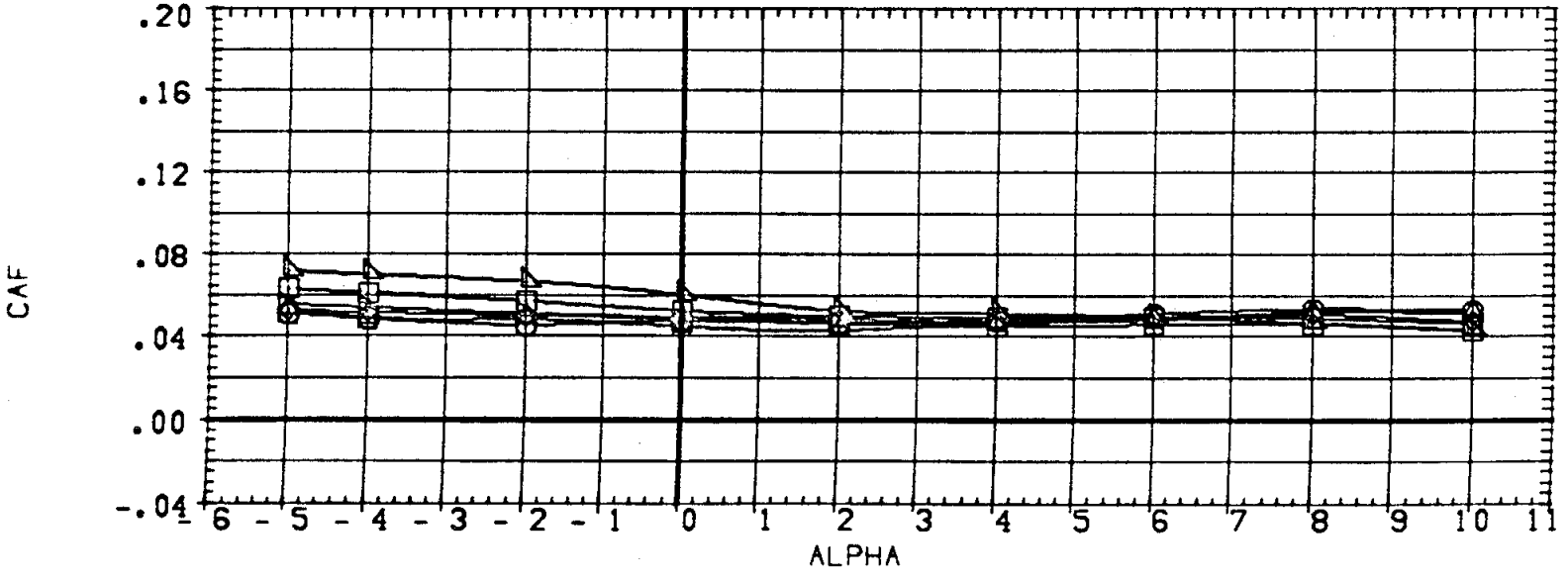
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	.000
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	.000
(A72118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	.000
(A72119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	.000
(A72120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



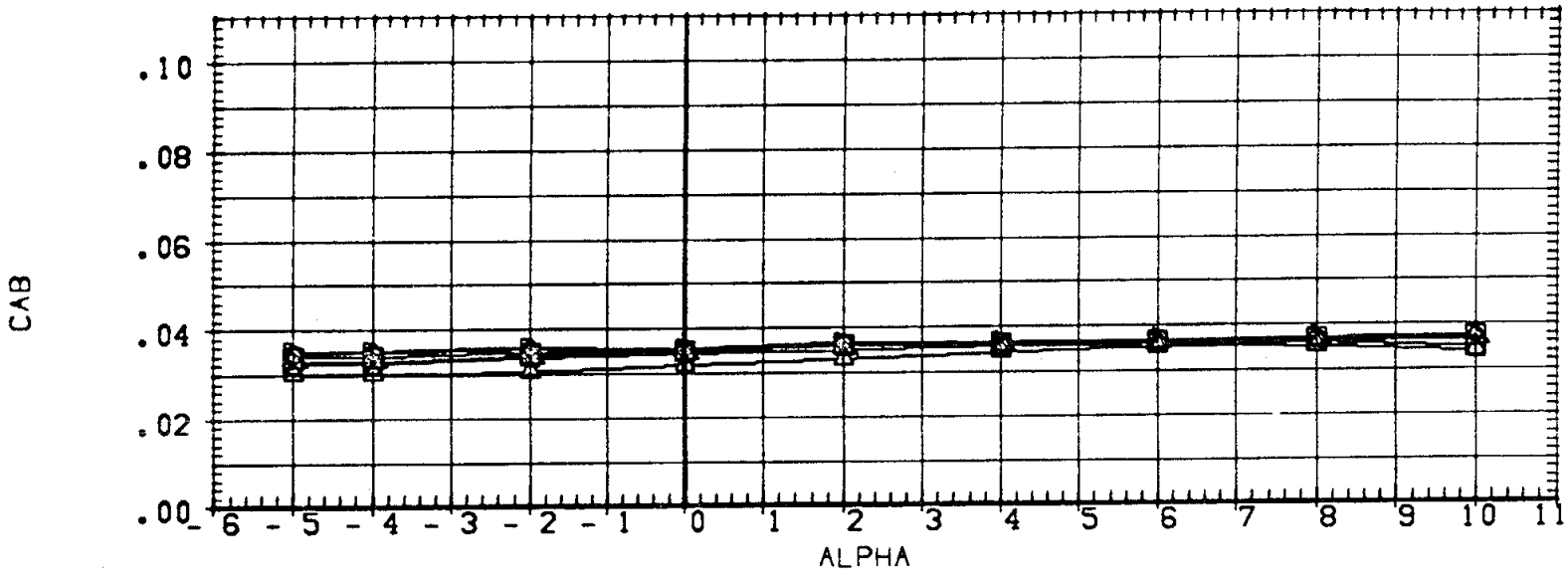


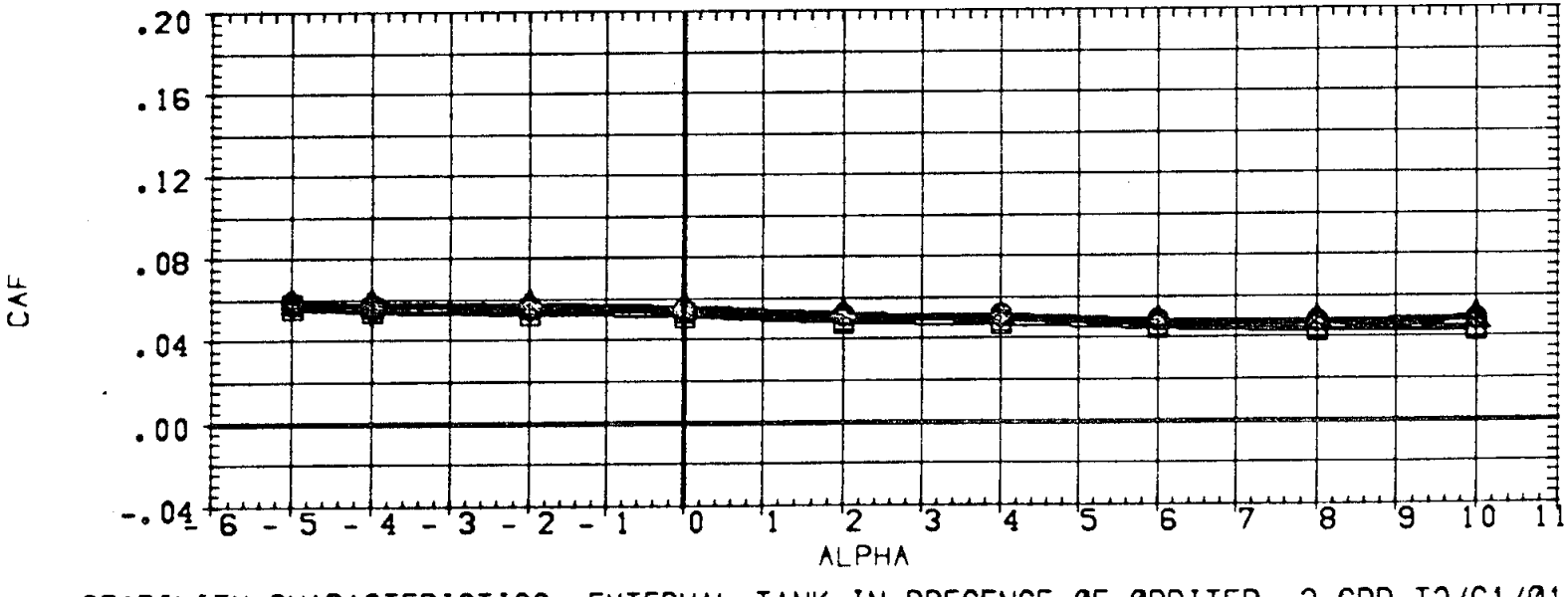
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(A72116)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.120	10.000	.000
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.120	10.000	.000
(A72118)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.240	10.000	.000
(A72119)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.240	10.000	.000
(A72120)	⊲	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



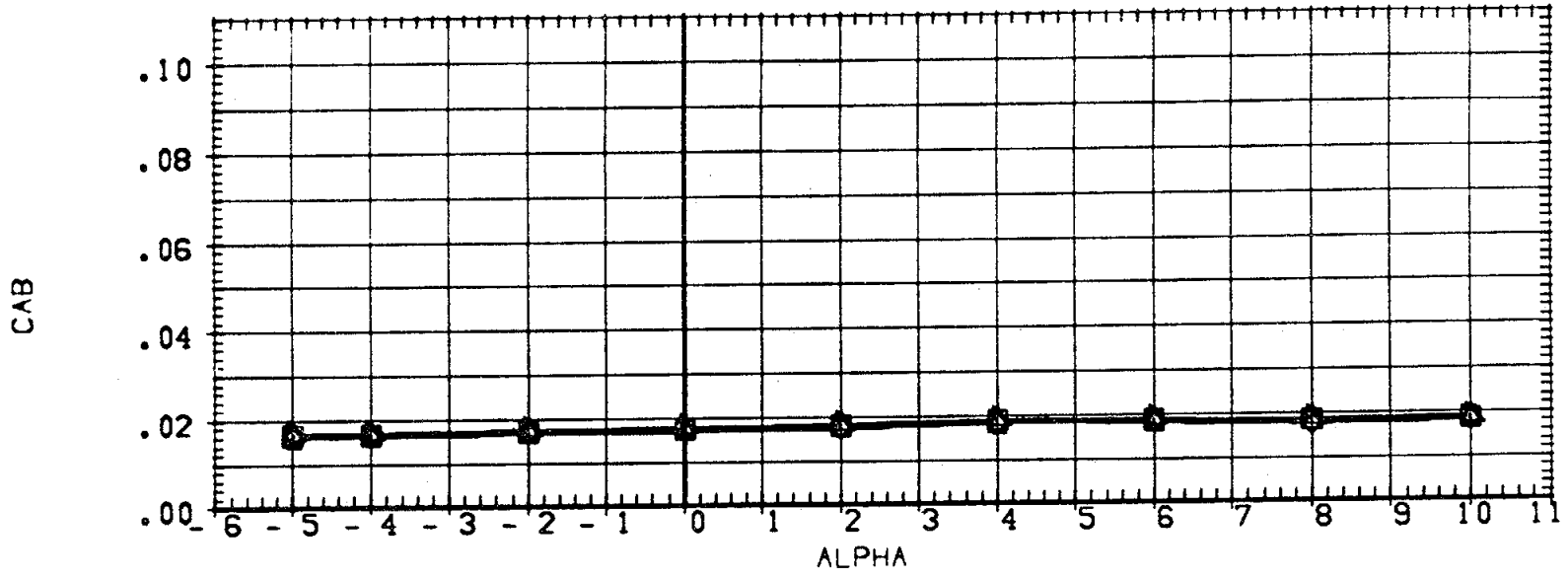


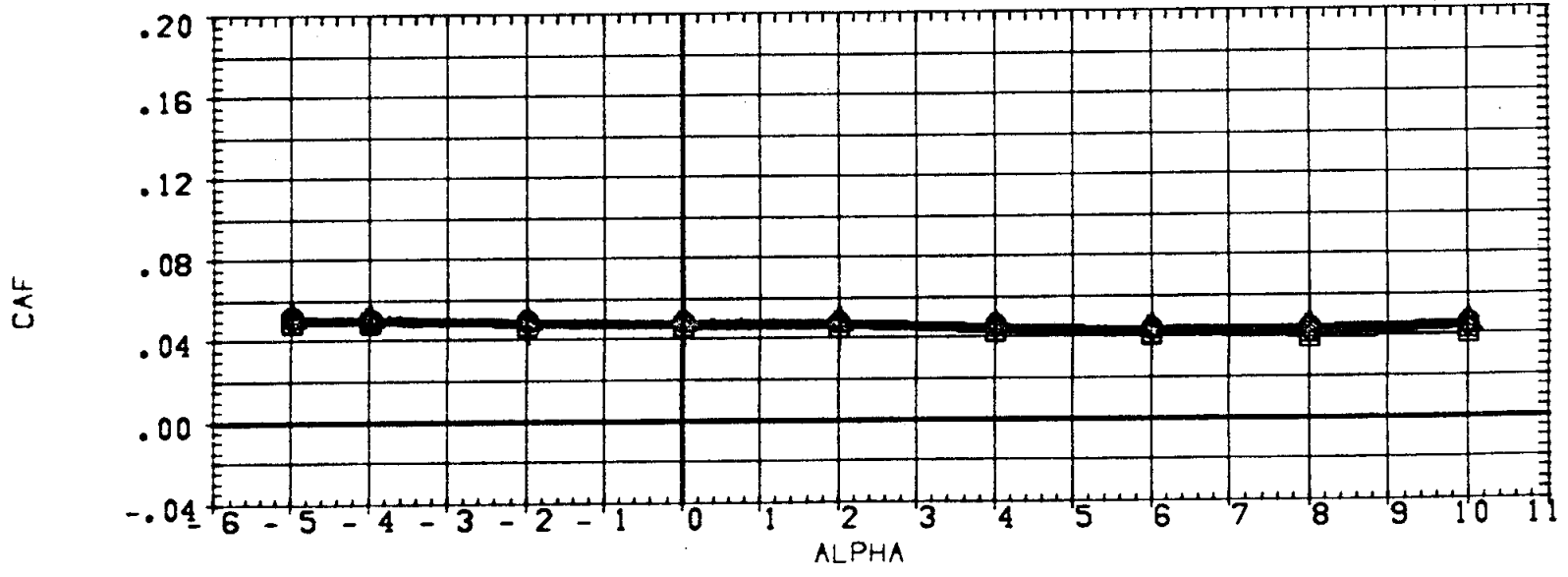
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(G)MACH = 1.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72116)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	.000
(A72117)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	.000
(A72118)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	.000
(A72119)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	.000
(A72120)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1526.0000	IN.
BREF	1528.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



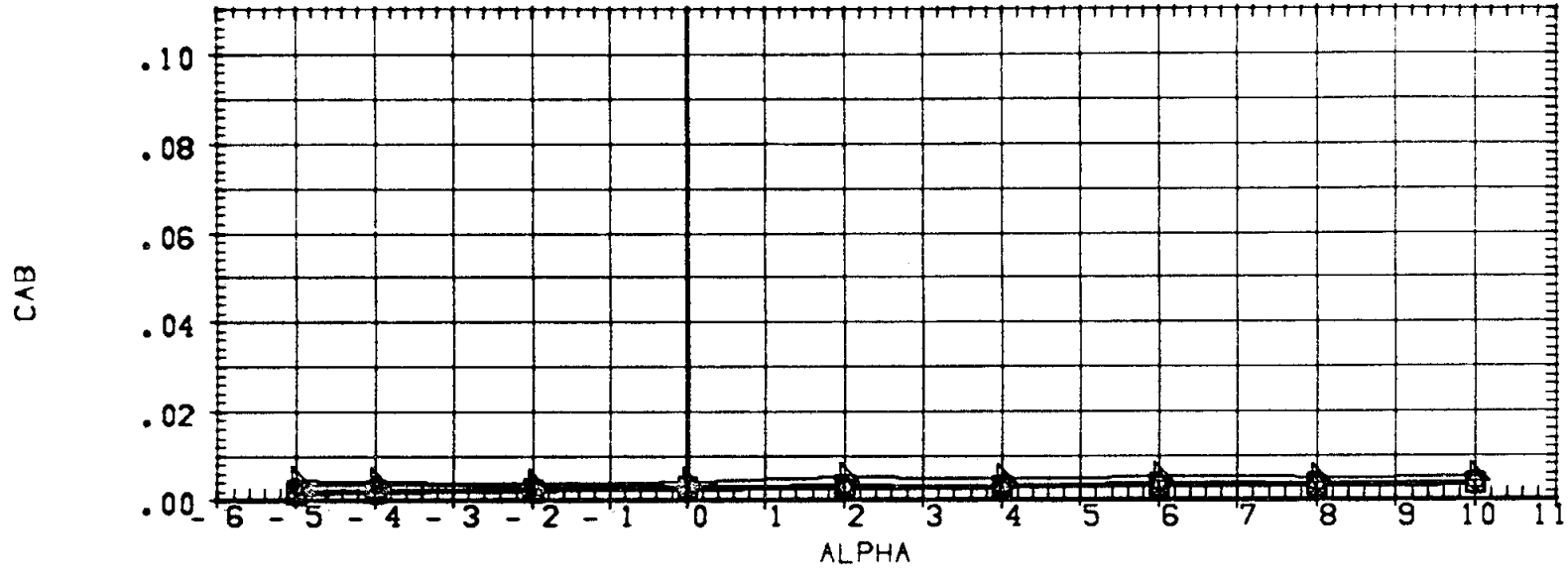


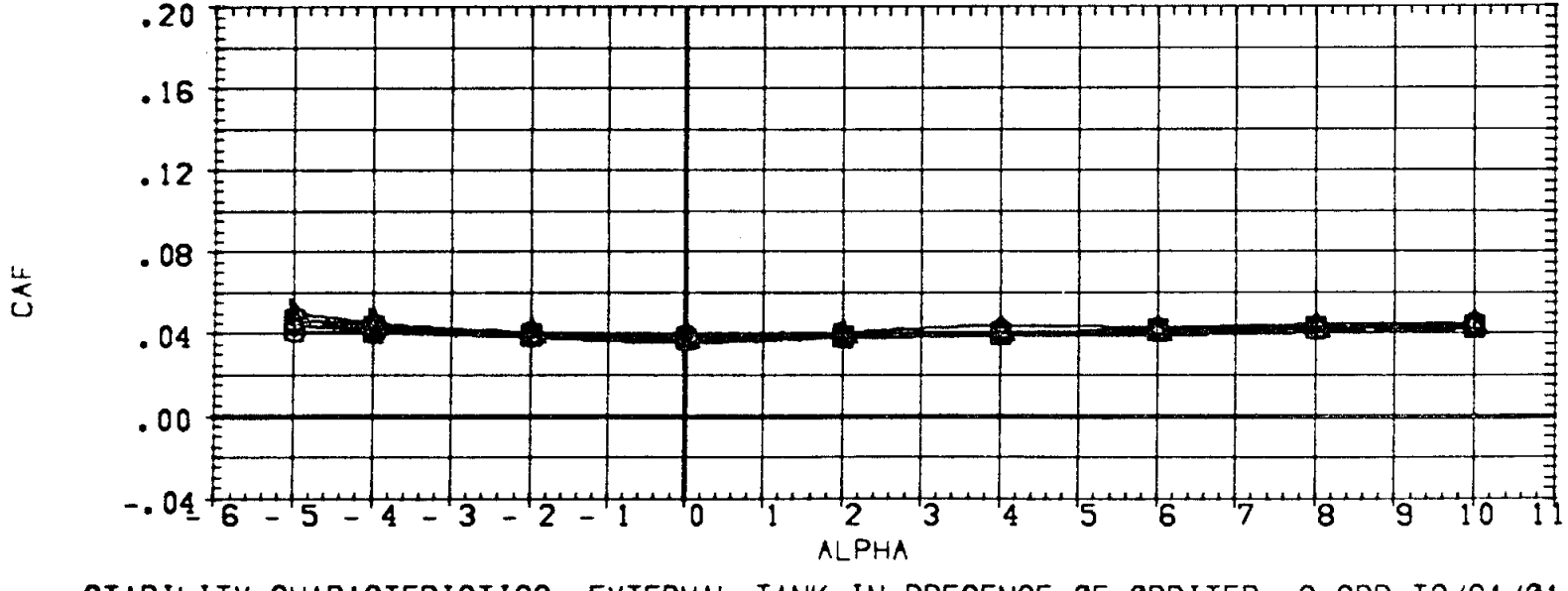
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72115)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(A72116)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.120	10.000	.000
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.120	10.000	.000
(A72118)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.240	10.000	.000
(A72119)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.240	10.000	.000
(A72120)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



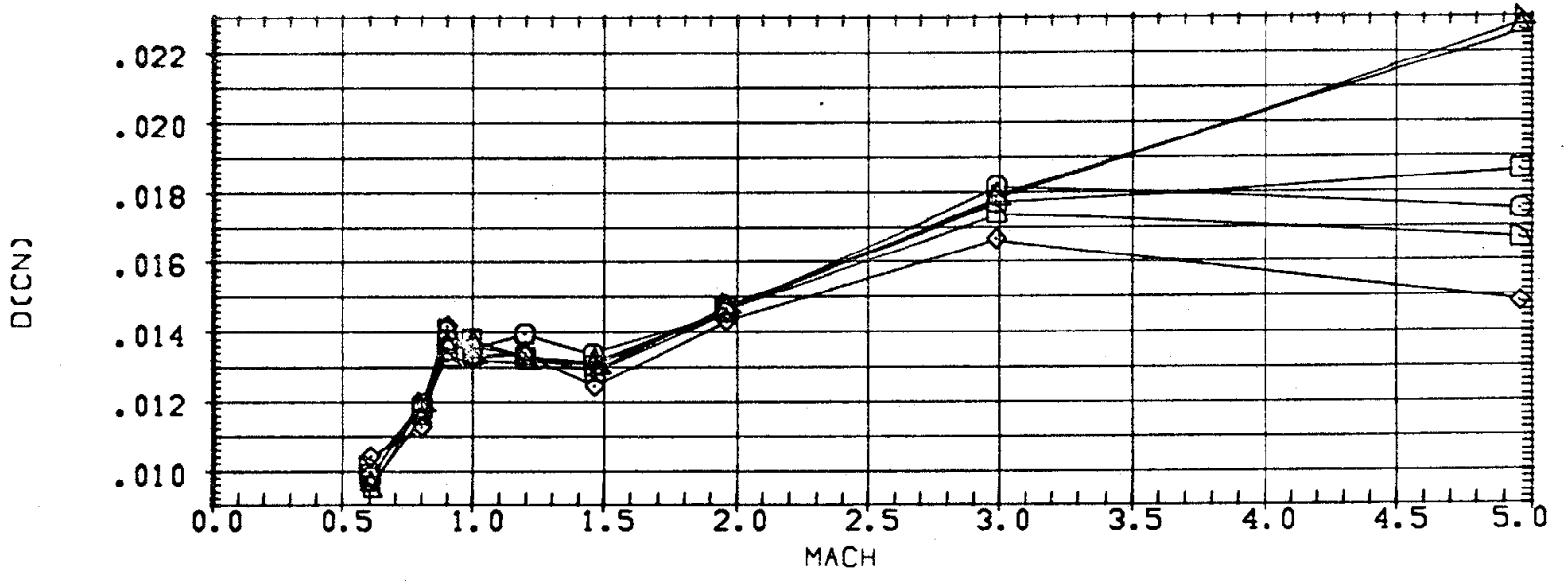


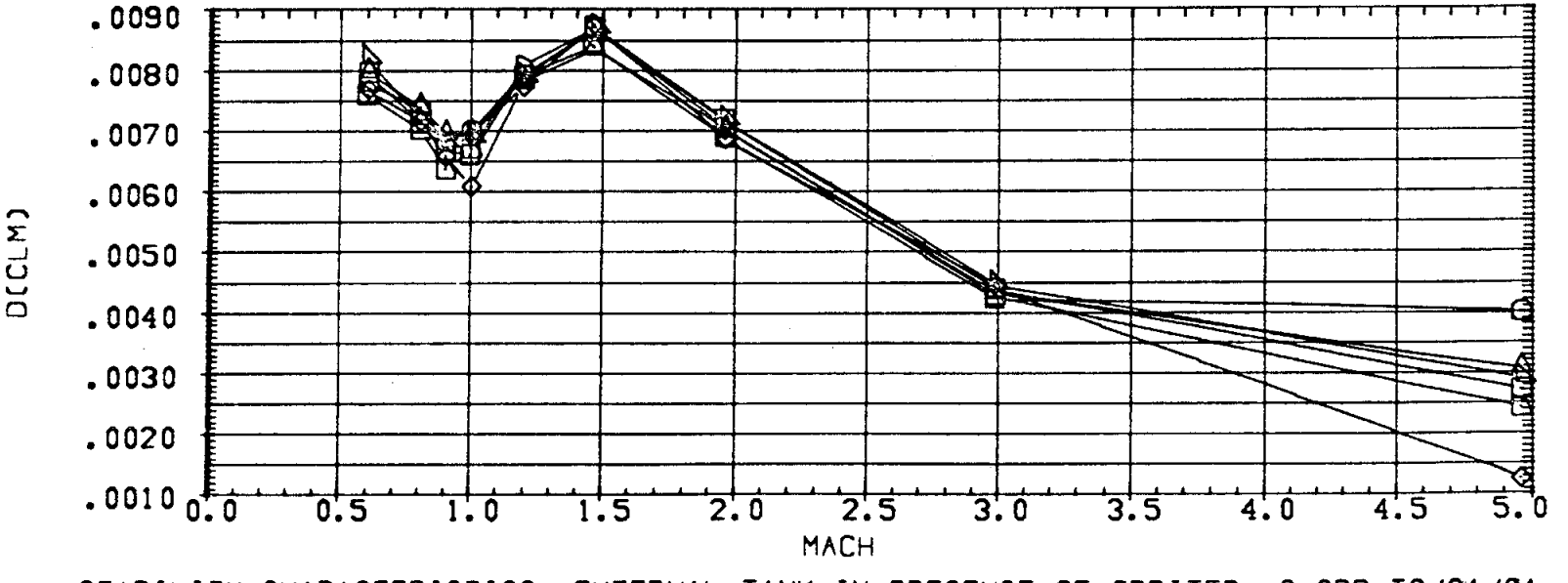
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(I)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872115)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(872116)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	.000
(872117)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	.000
(872118)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	.000
(872119)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	.000
(872120)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



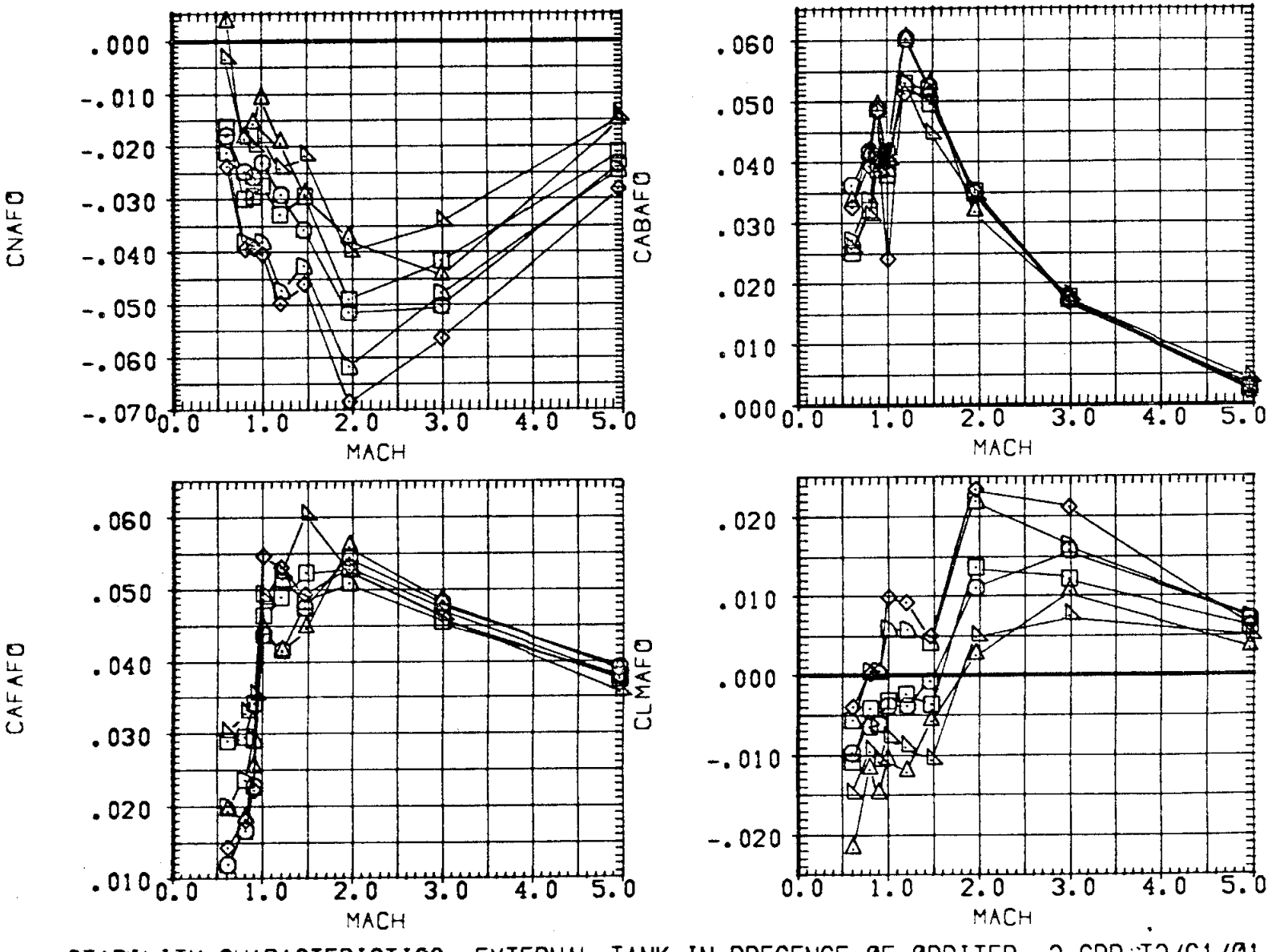


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(872115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872118)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872119)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872120)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	.000
-1.200	.120	10.000	.000
1.500	.120	10.000	.000
.000	.240	10.000	.000
-1.200	.240	10.000	.000
1.500	.240	10.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

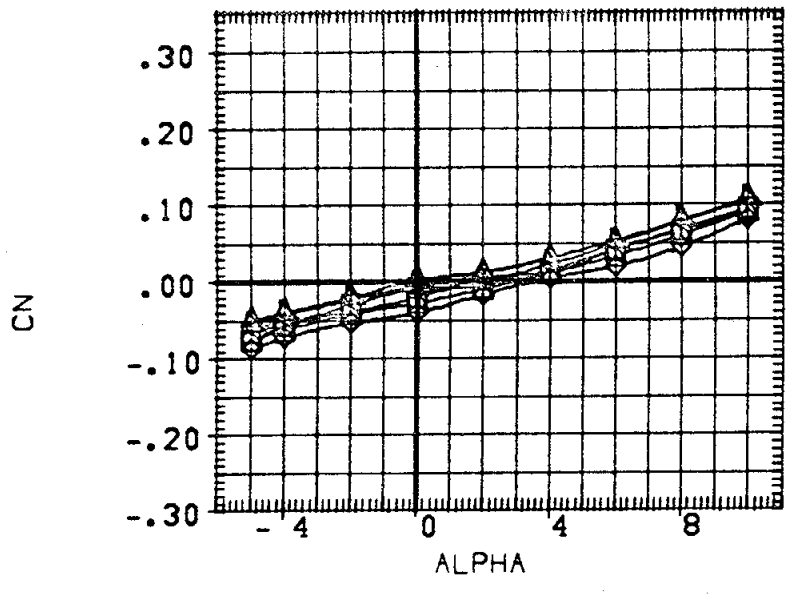


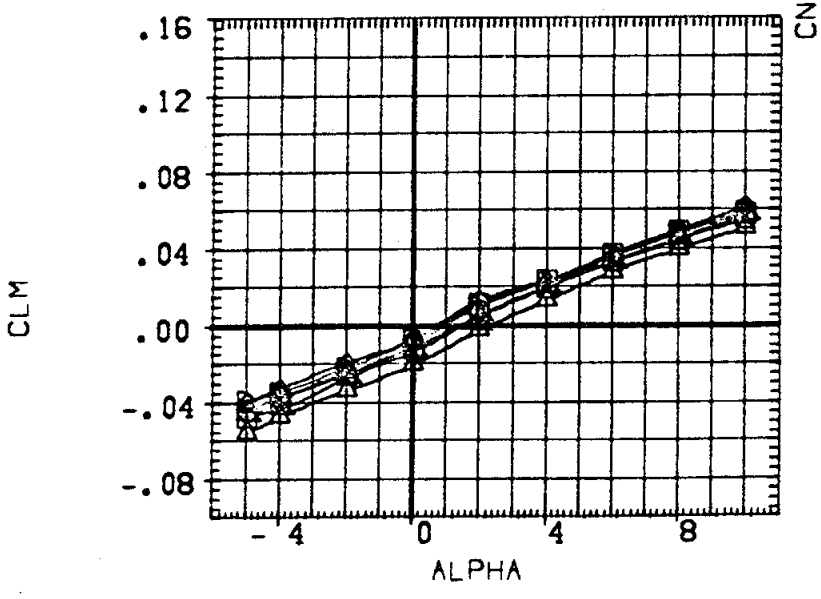
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

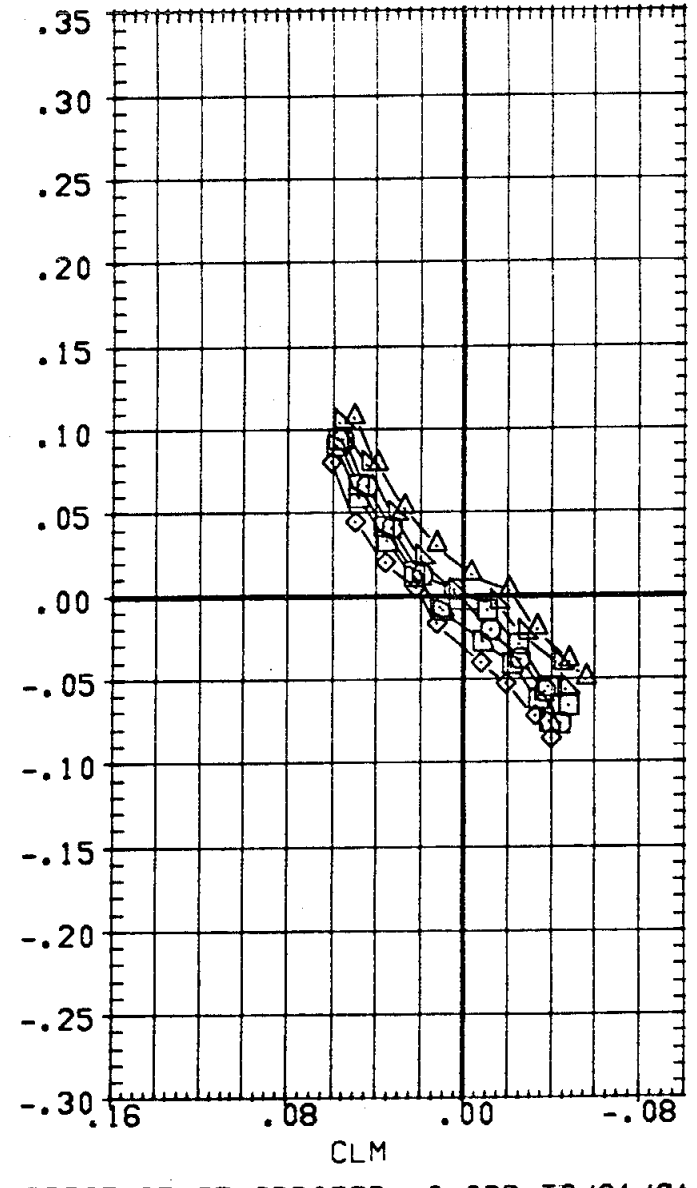
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72128)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





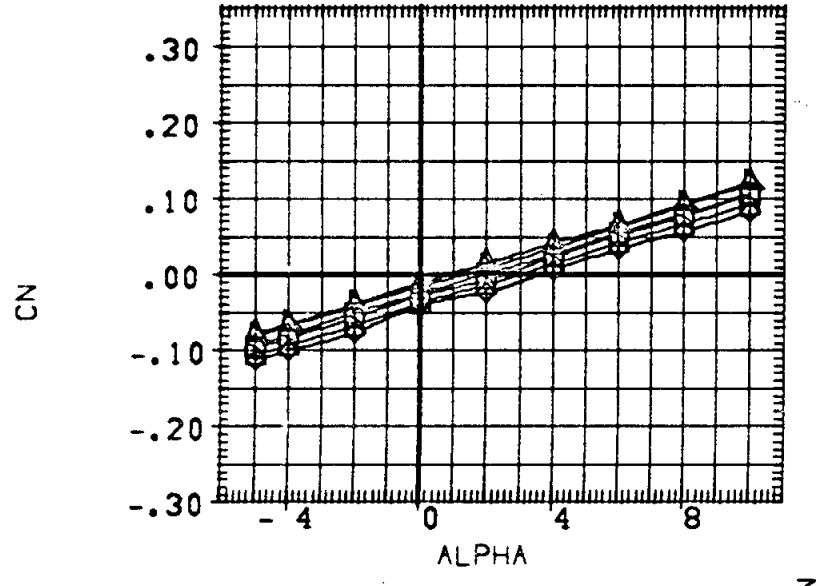


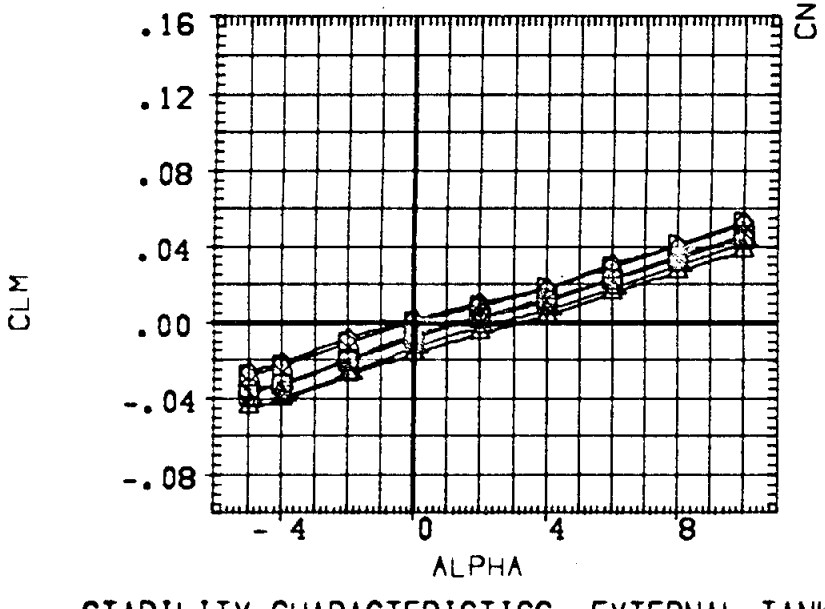
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

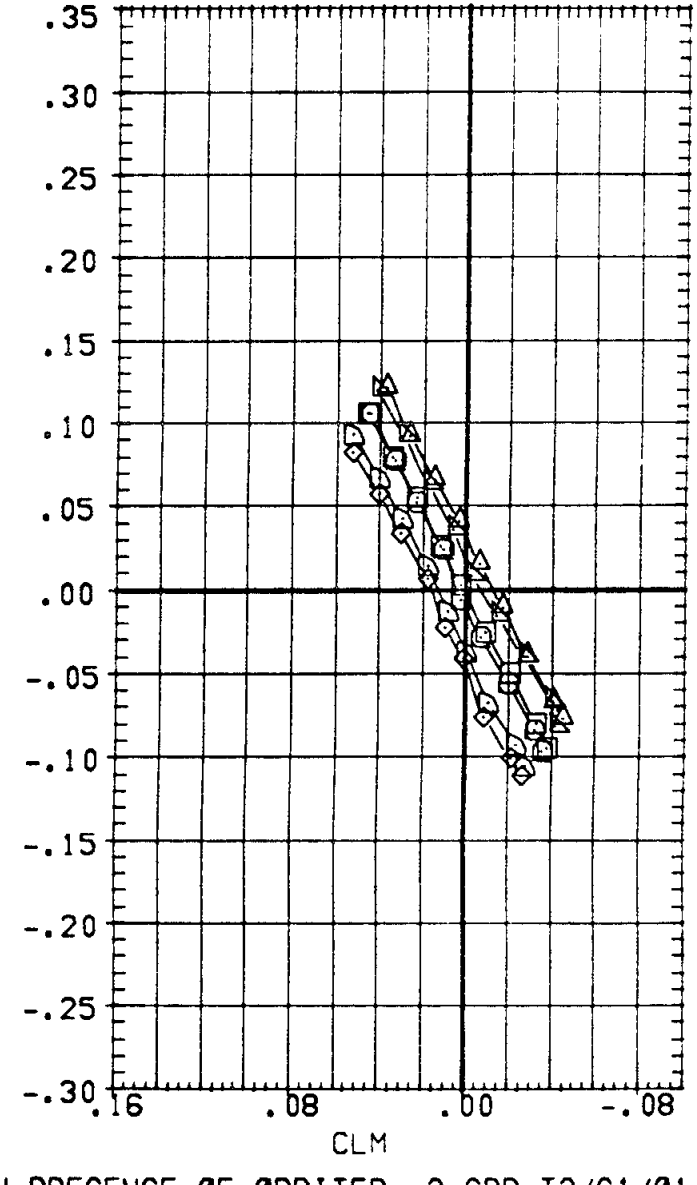
(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72129)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624
(A72130)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.120	10.000	-.624
(A72131)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.120	10.000	-.624
(A72132)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.240	10.000	-.624
(A72133)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.240	10.000	-.624
(A72134)	⬠	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







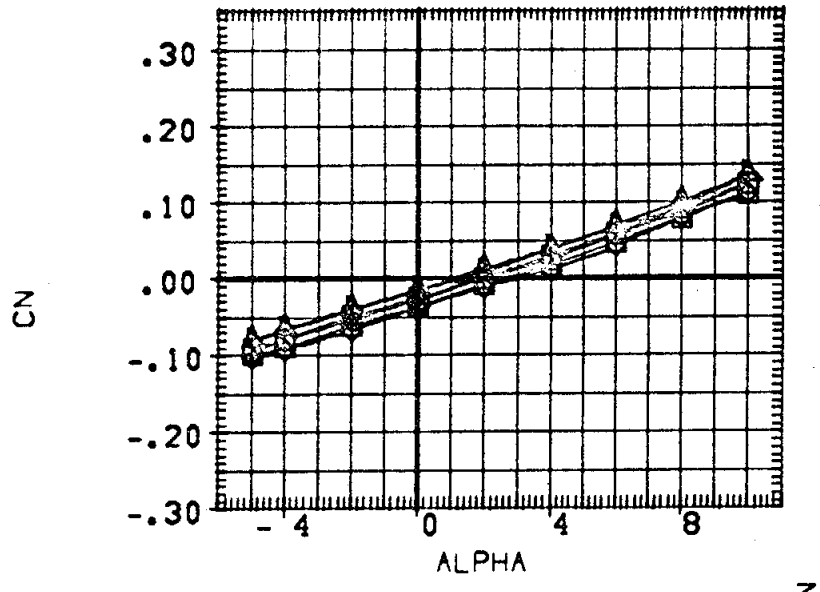
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

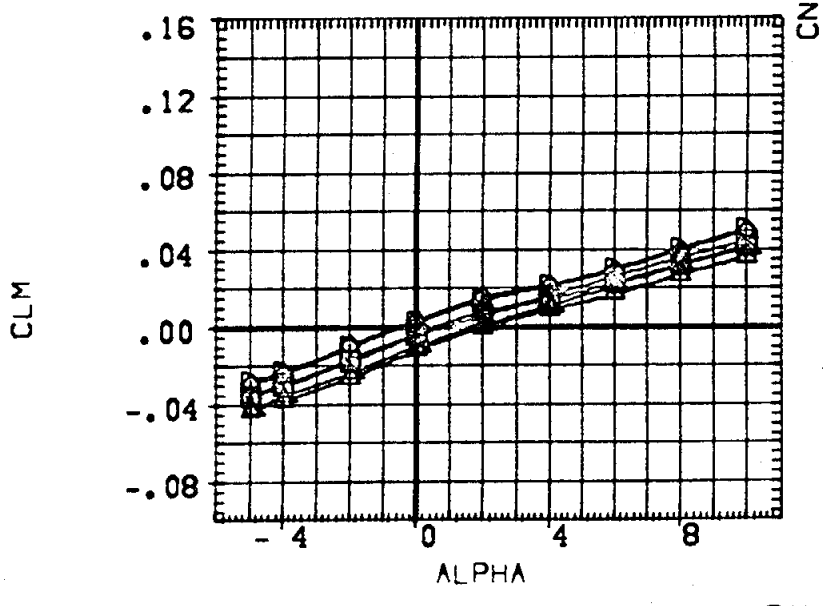
(B)MACH = .90

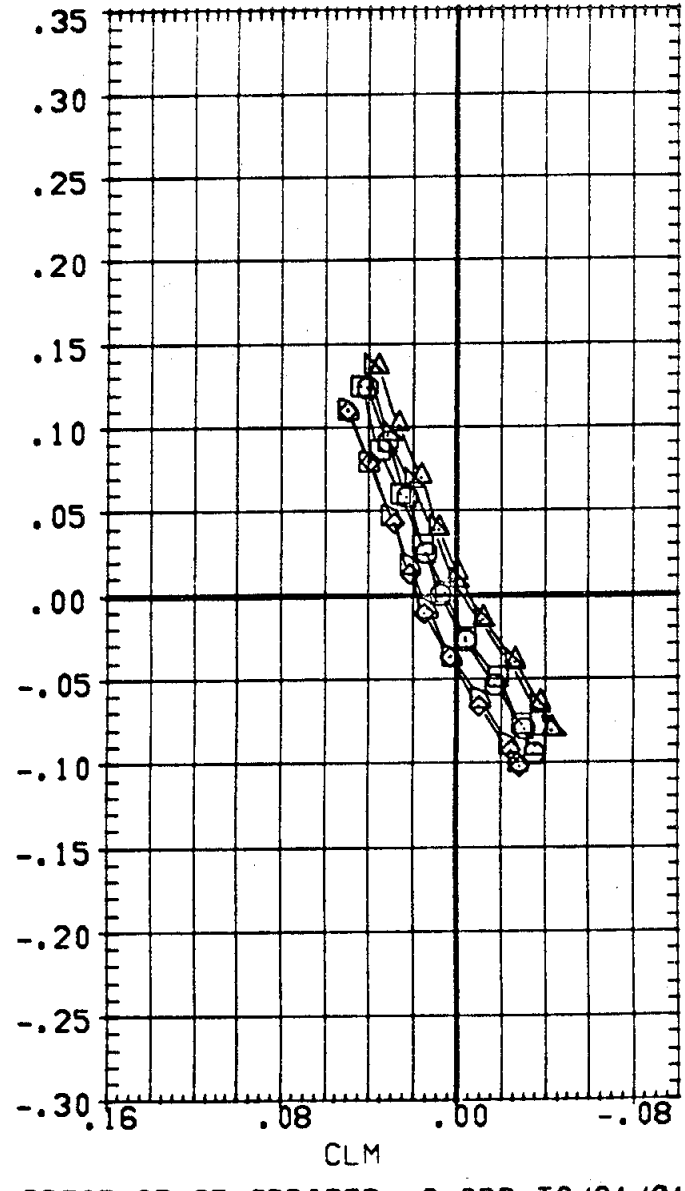
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2129)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





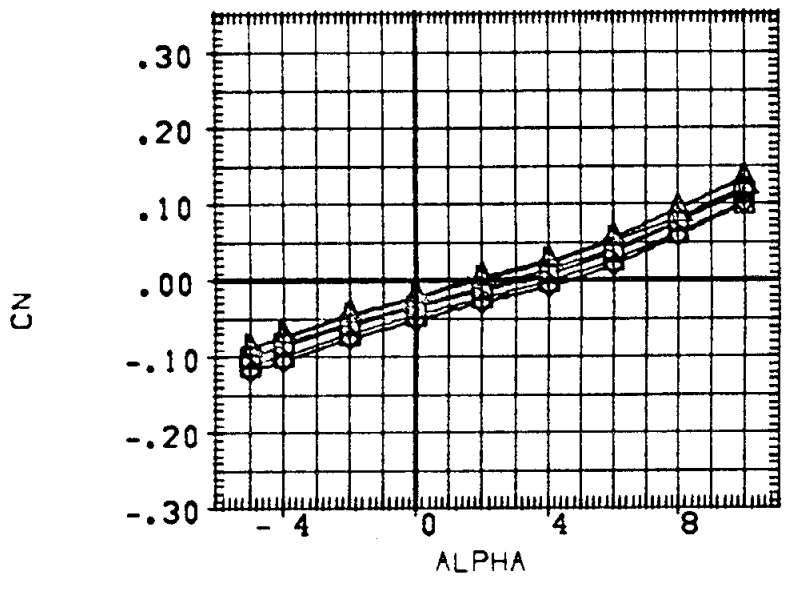


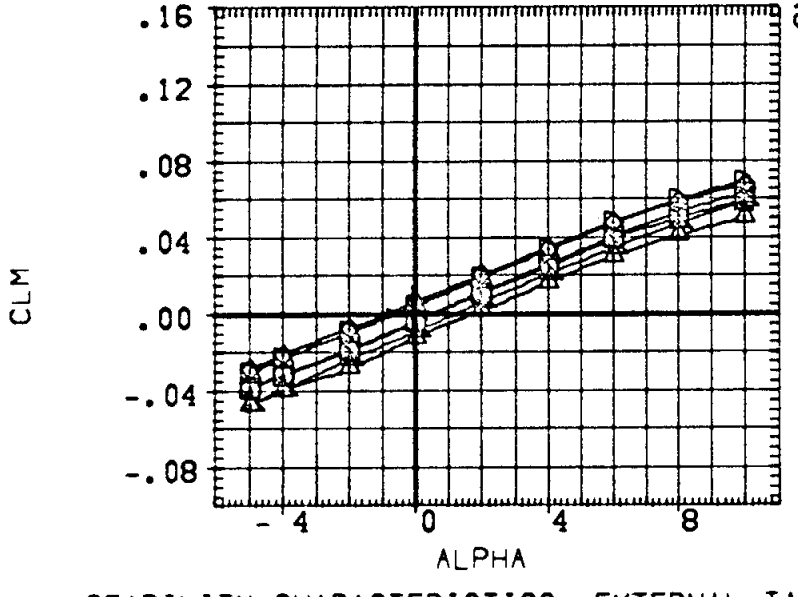
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

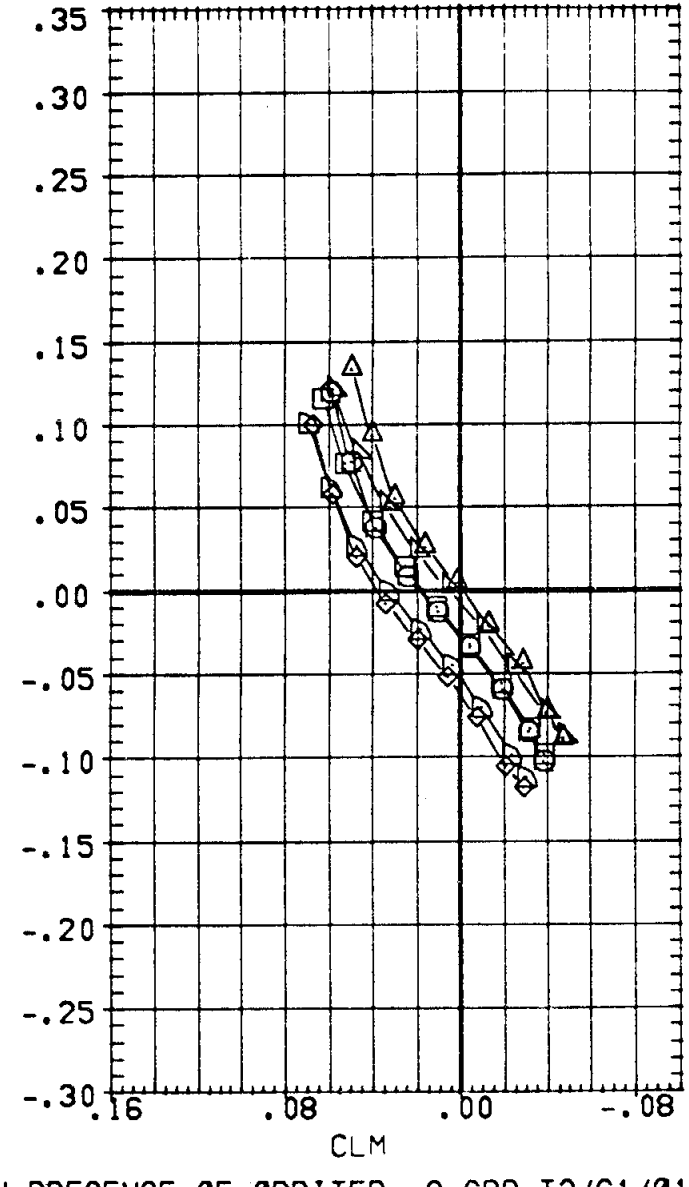
(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72129)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	-.624
(A72130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	-.624
(A72131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	-.624
(A72133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	-.624
(A72134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







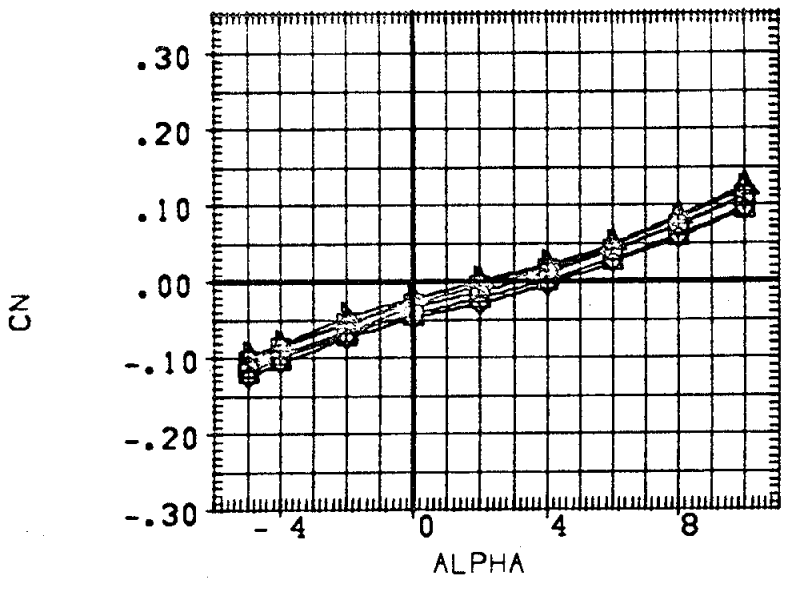
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

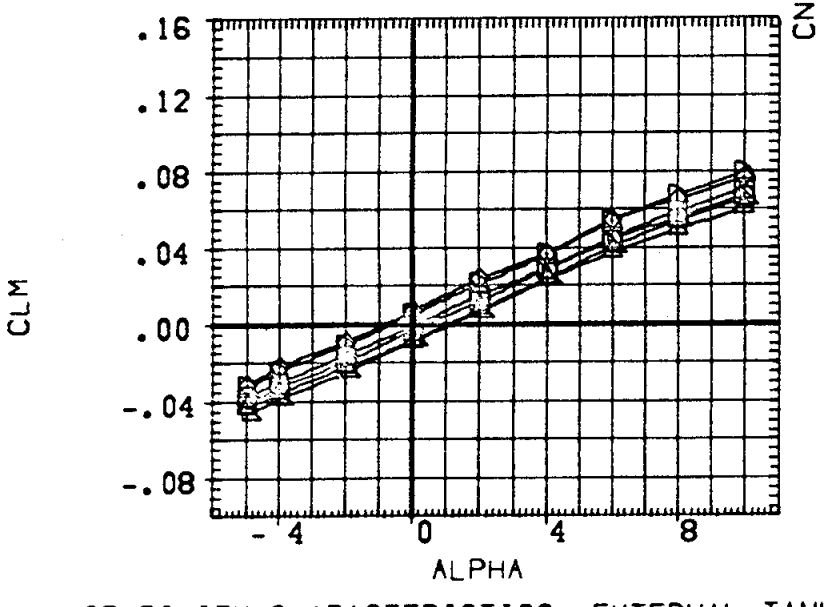
(D)MACH = 1.20

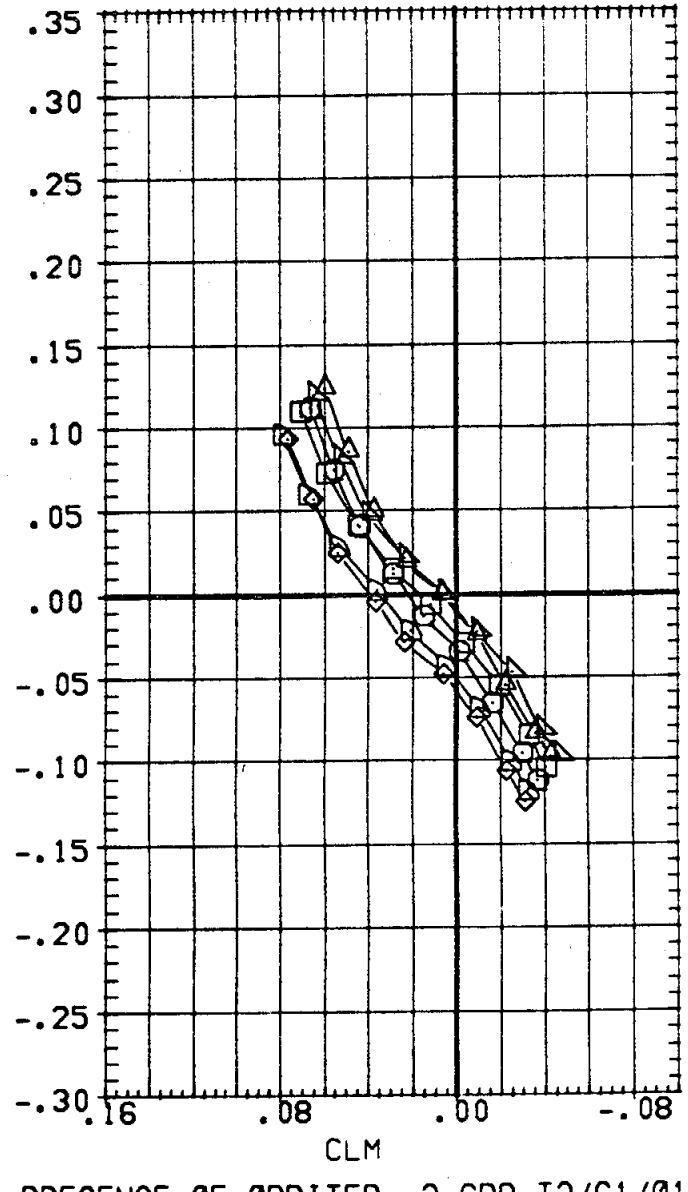
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72129)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







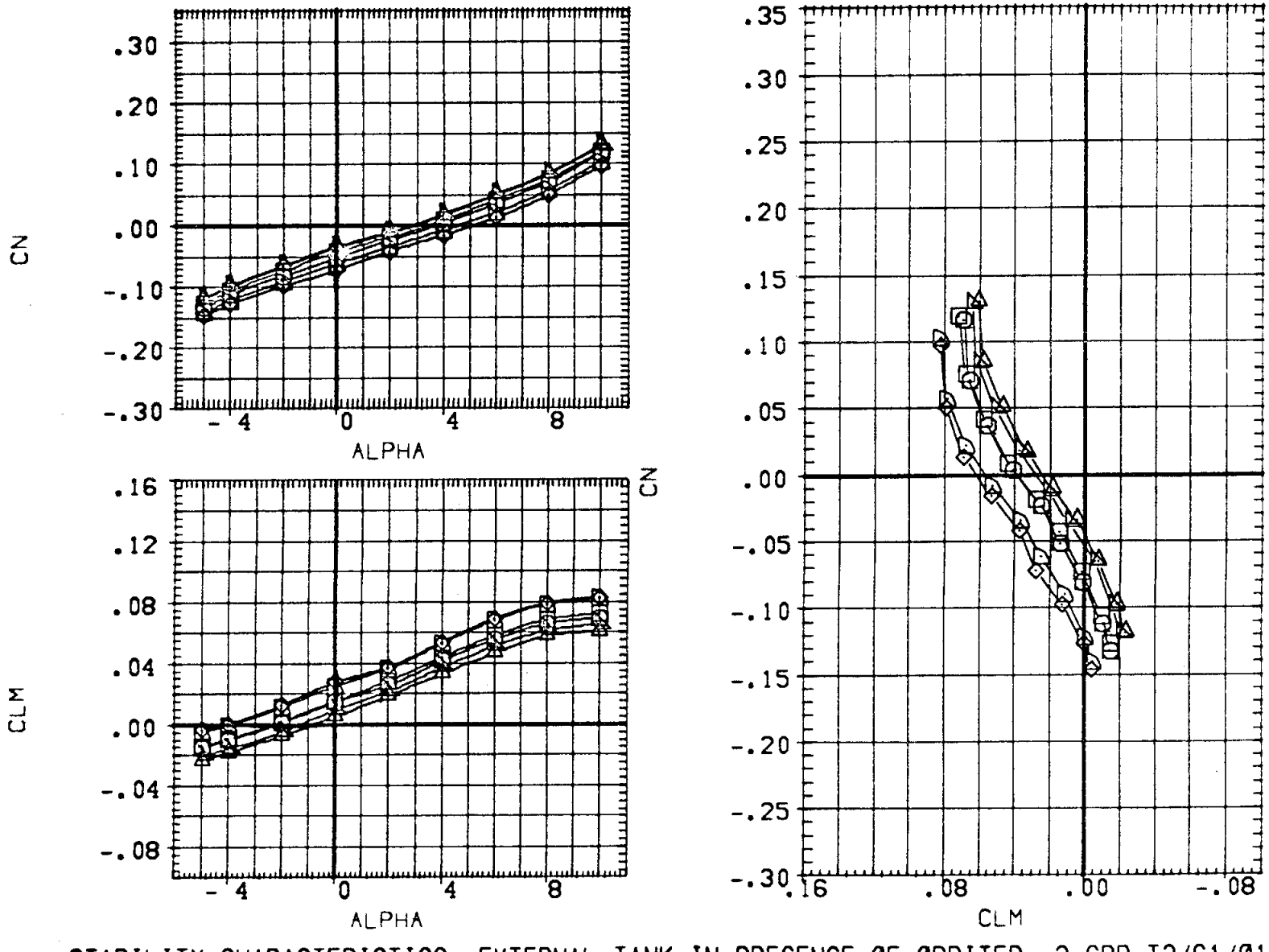
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72129)	○	MSFC S45 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72130)	□	MSFC S45 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72131)	△	MSFC S45 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72132)	◇	MSFC S45 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72133)	▽	MSFC S45 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72134)	▷	MSFC S45 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



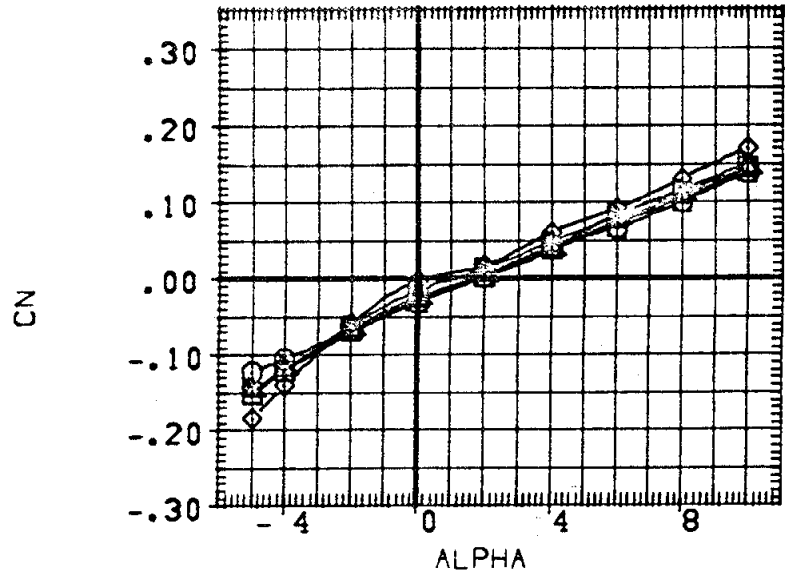
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

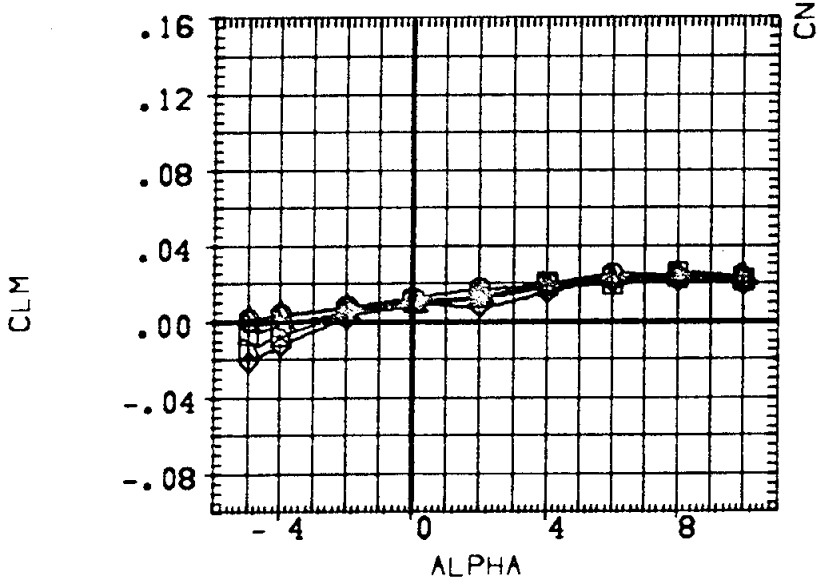
(F)MACH = 1.96

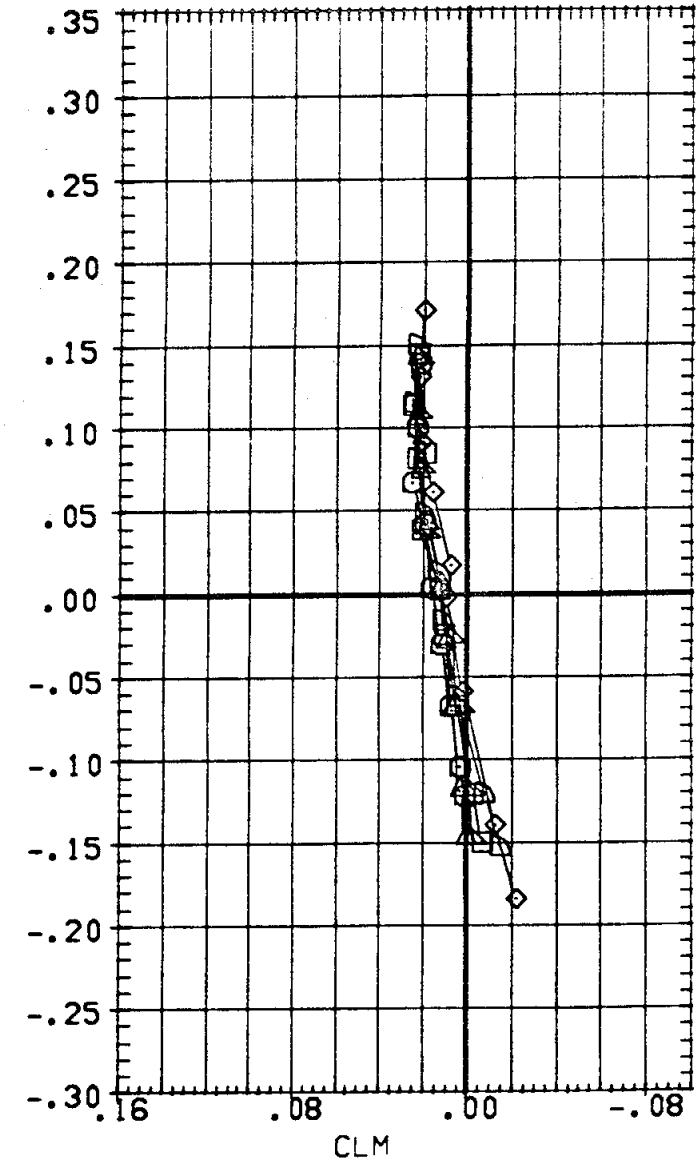
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72130)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72131)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72132)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72133)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(A72134)	⬡	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





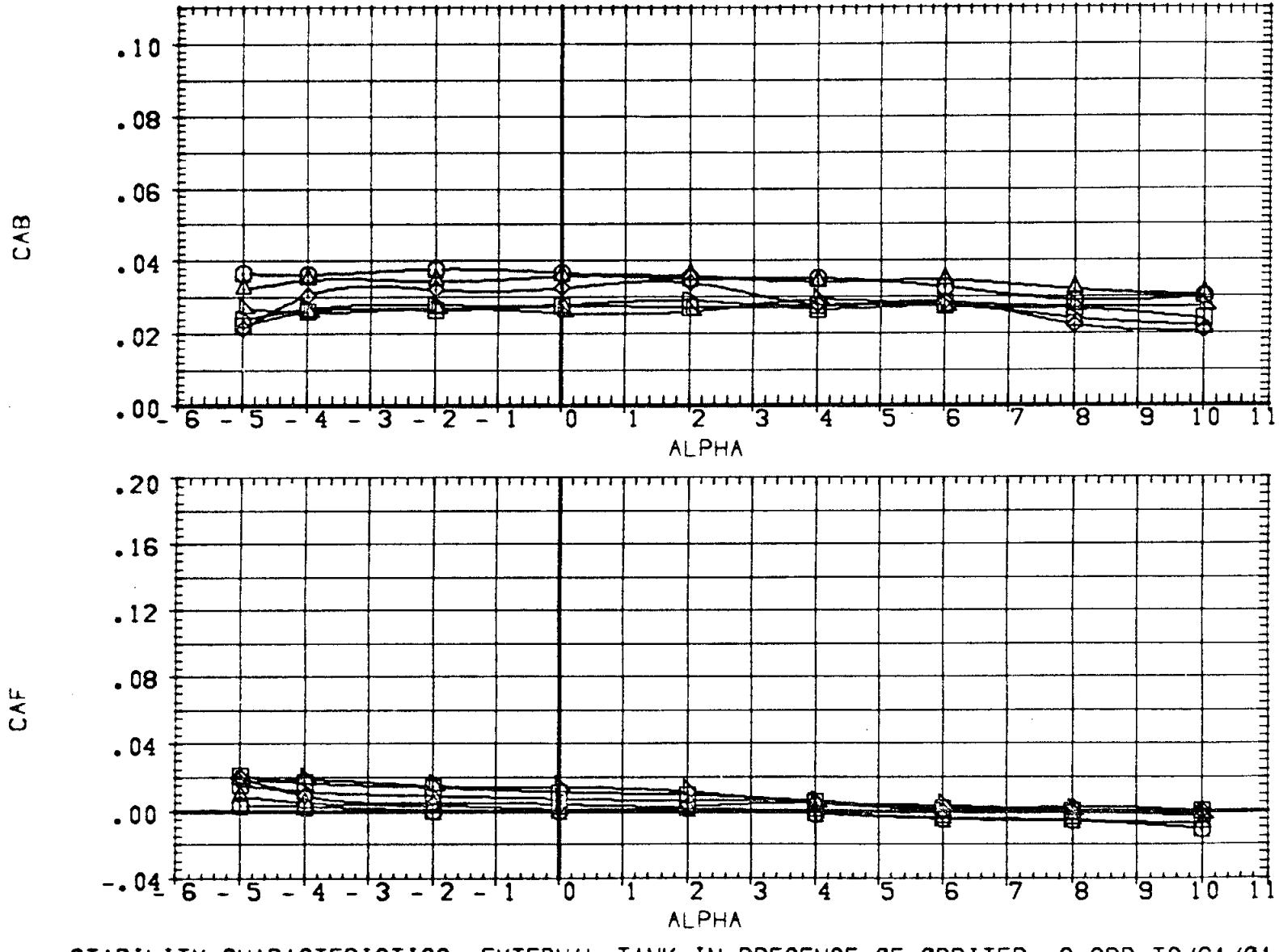


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72129)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	-.624
(A72130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	-.624
(A72131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	-.624
(A72133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	-.624
(A72134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

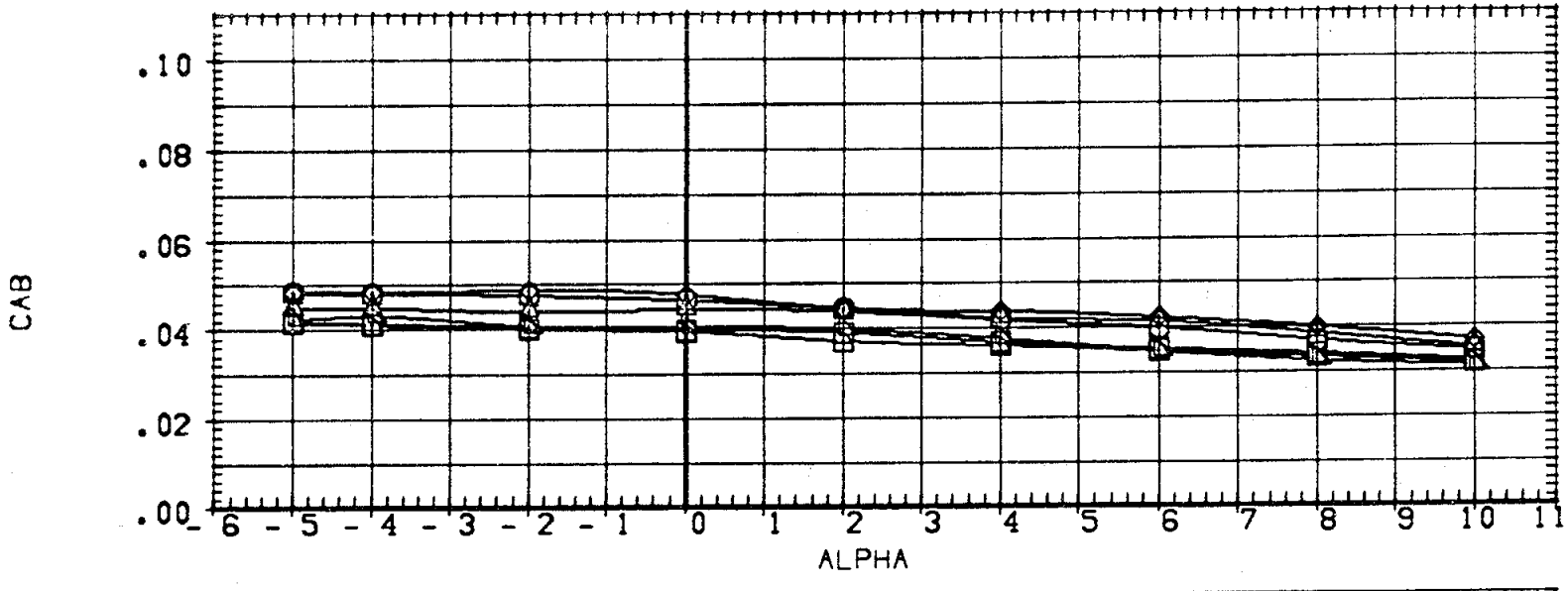


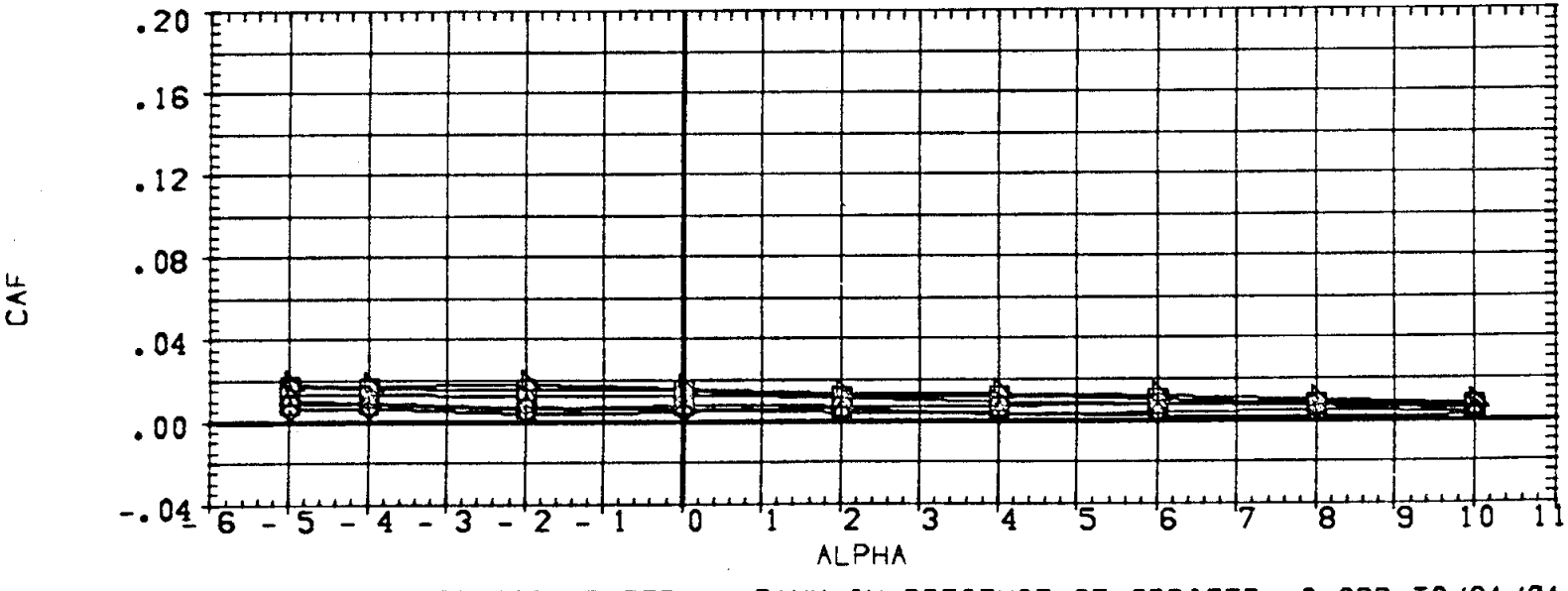
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72129)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	-.624
(A72130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	-.624
(A72131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	-.624
(A72133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	-.624
(A72134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



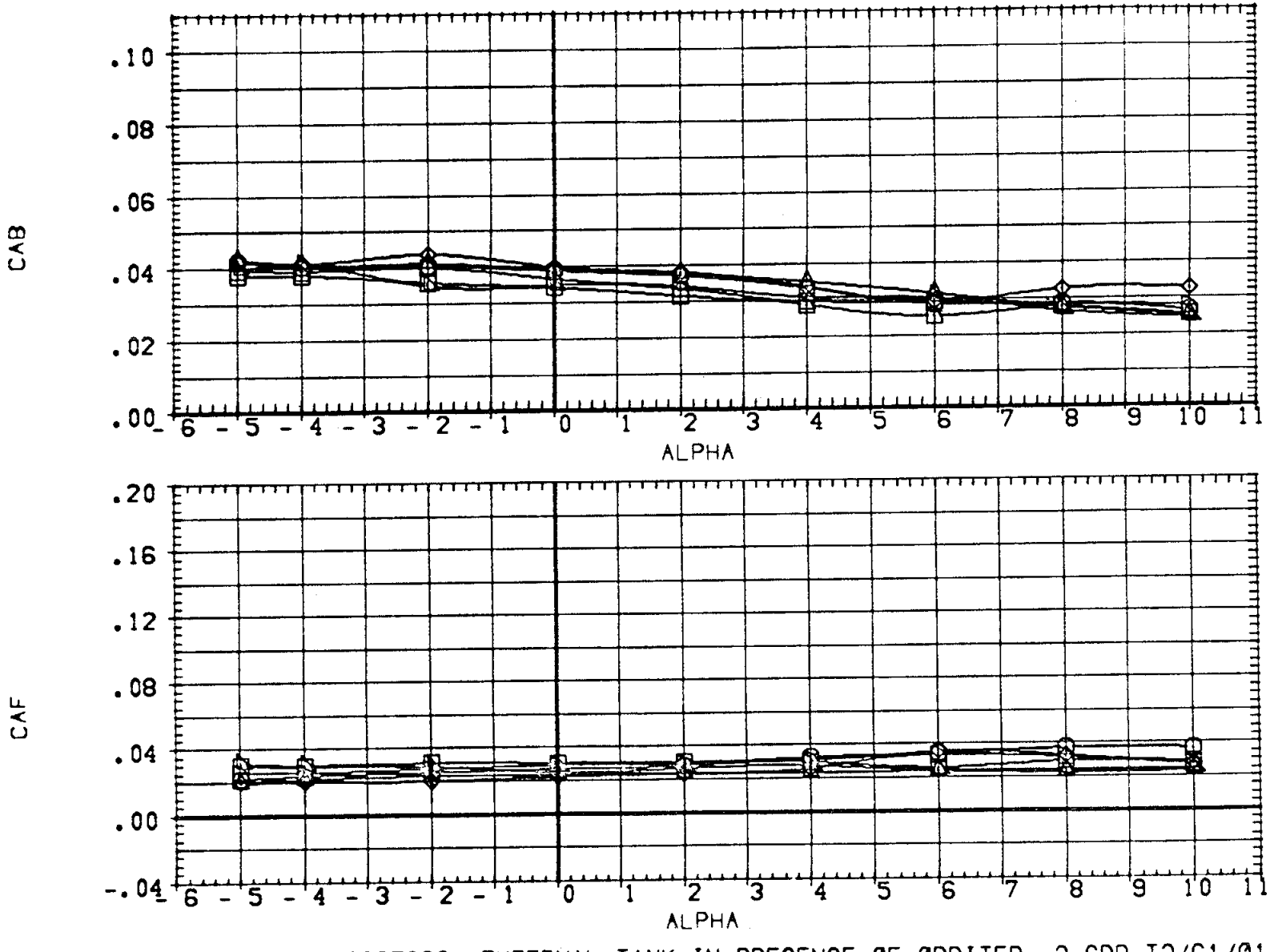


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72129)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	-.624
(A72130)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	-.624
(A72131)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72132)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	-.624
(A72133)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	-.624
(A72134)	⊗	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



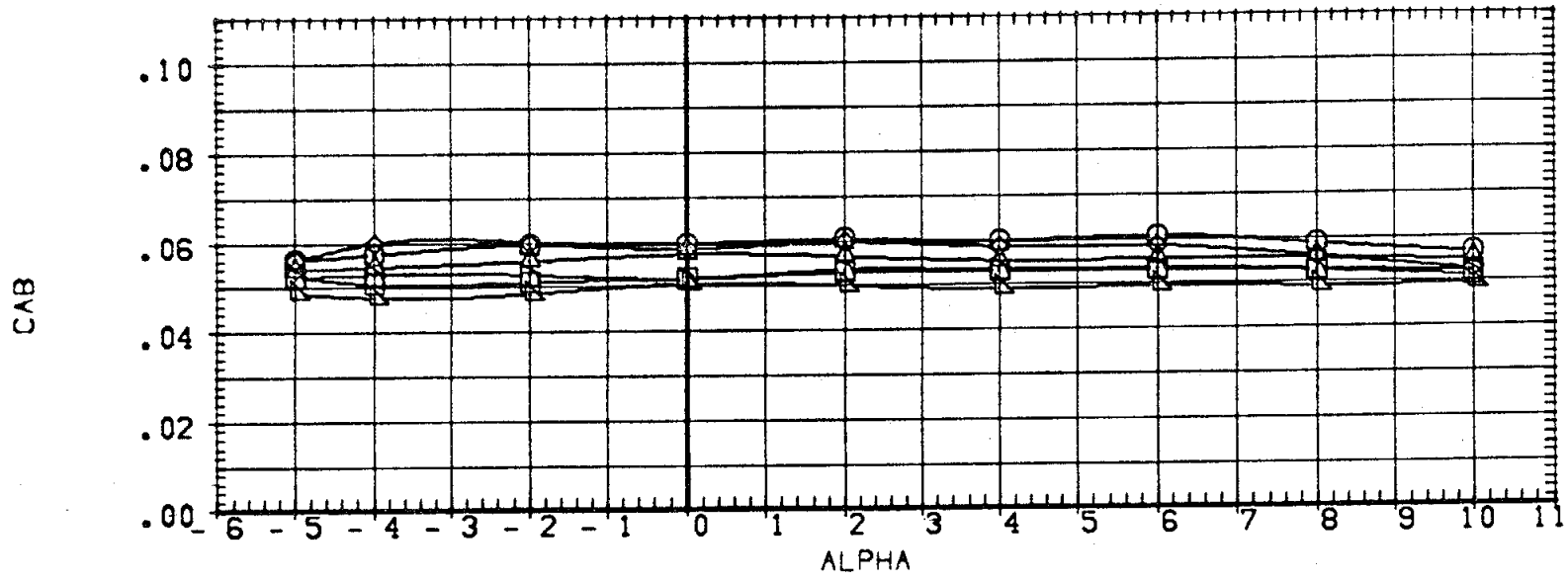
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

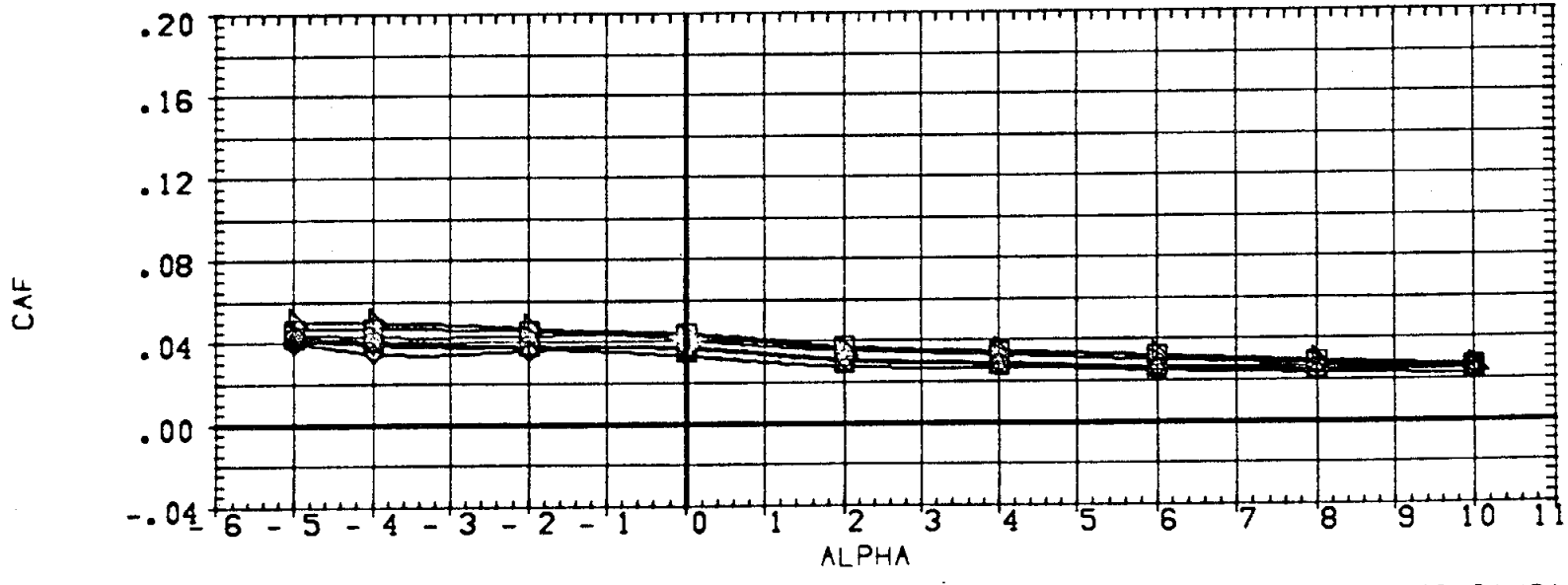
(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72129)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624
(A72130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.120	10.000	-.624
(A72131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.120	10.000	-.624
(A72132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.240	10.000	-.624
(A72133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.240	10.000	-.624
(A72134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.240	10.000	-.624

DATA SET

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



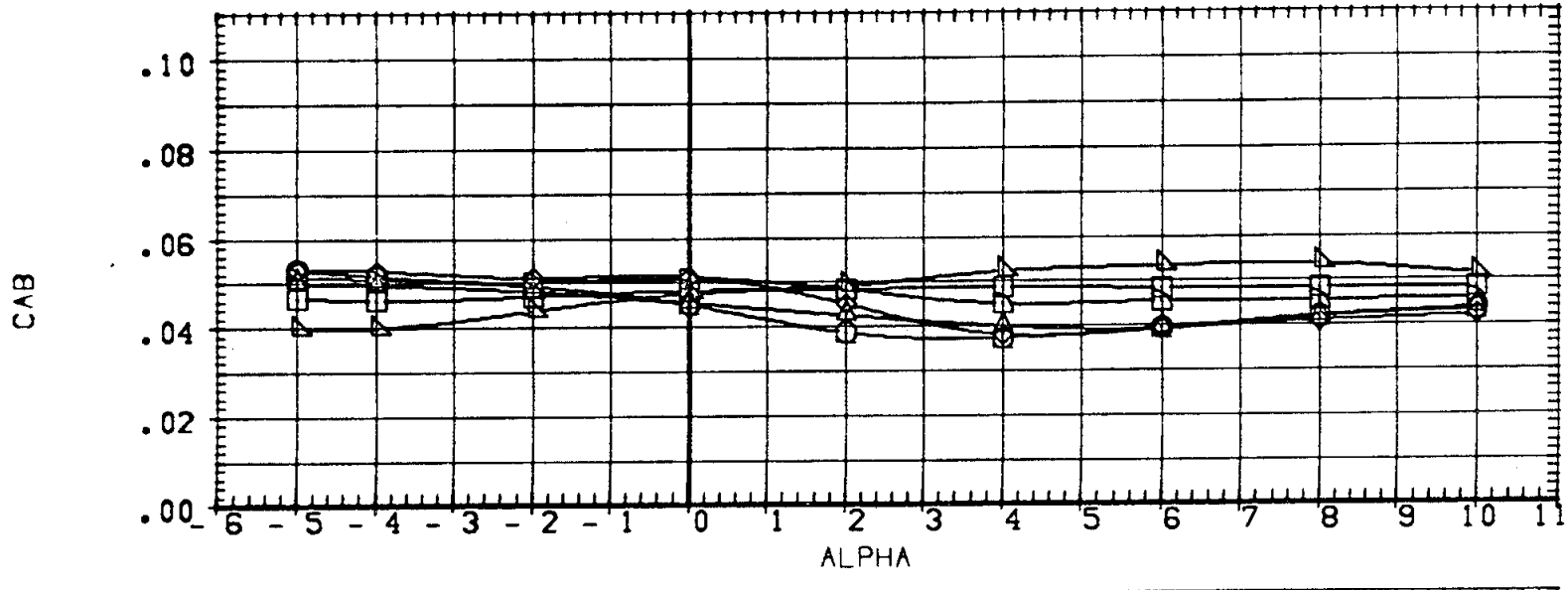


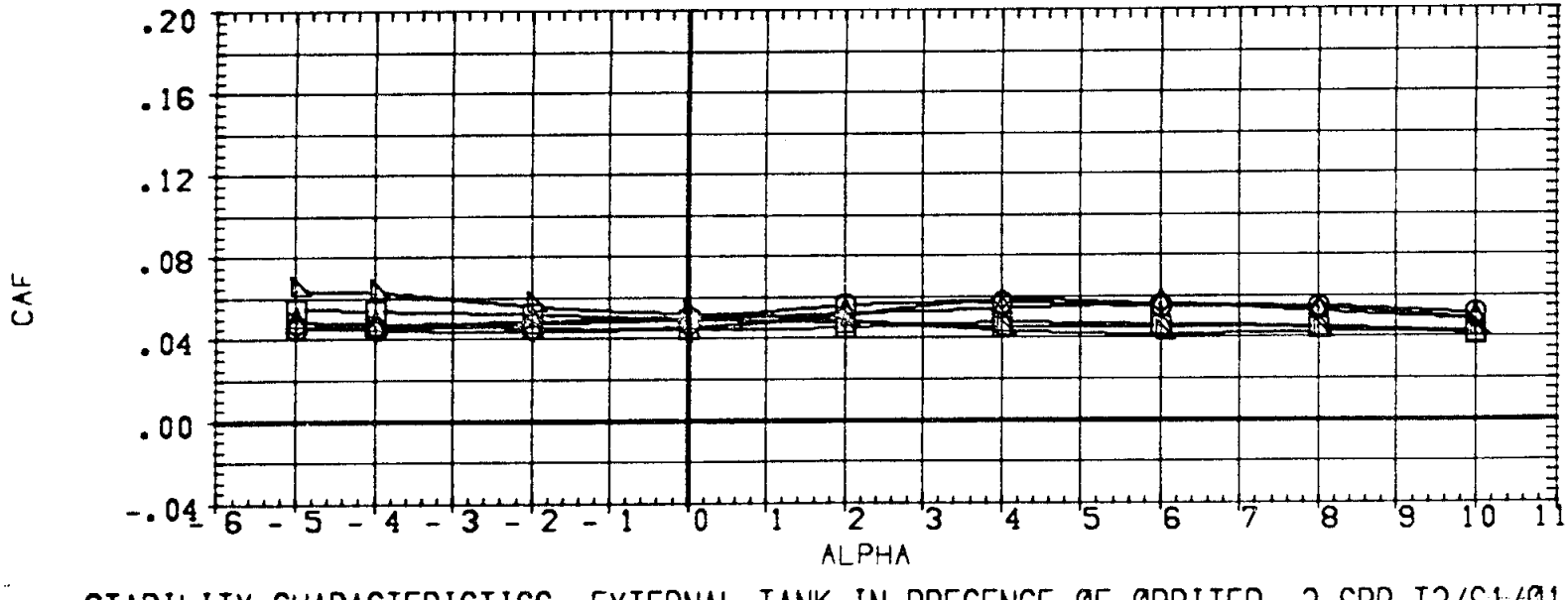
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72129)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	-.624
(A72130)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	-.624
(A72131)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72132)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	-.624
(A72133)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	-.624
(A72134)	⊿	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



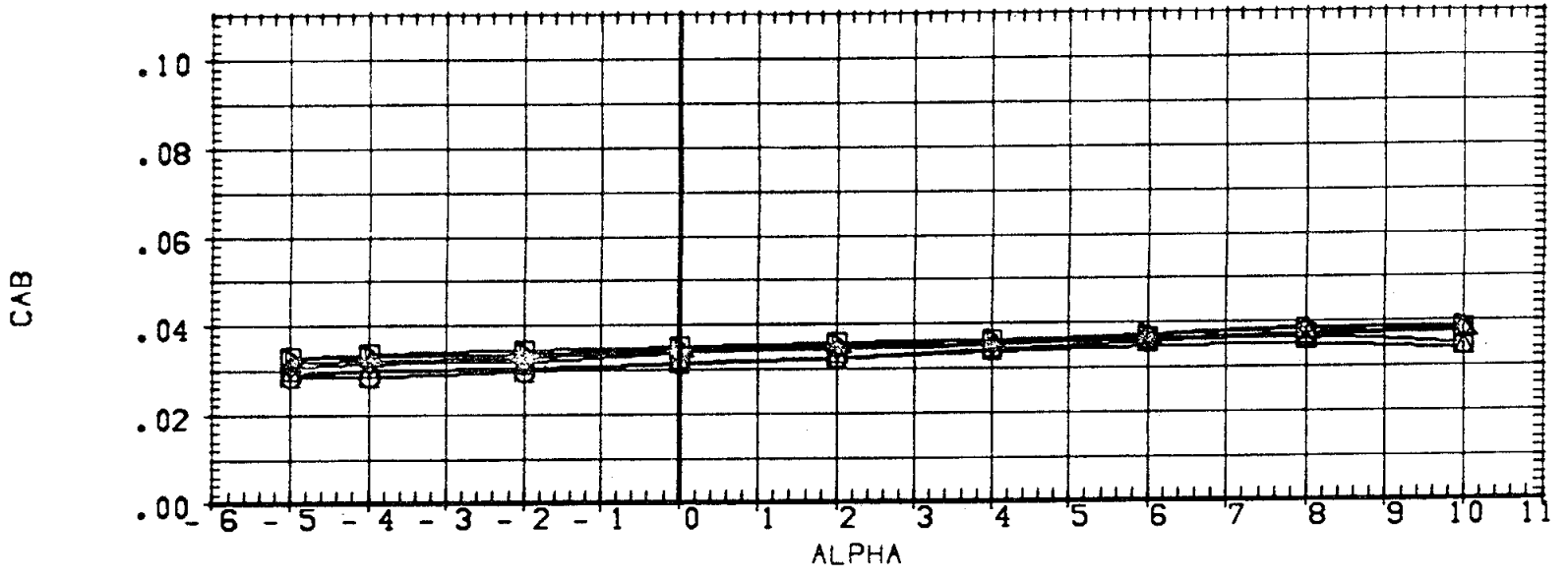


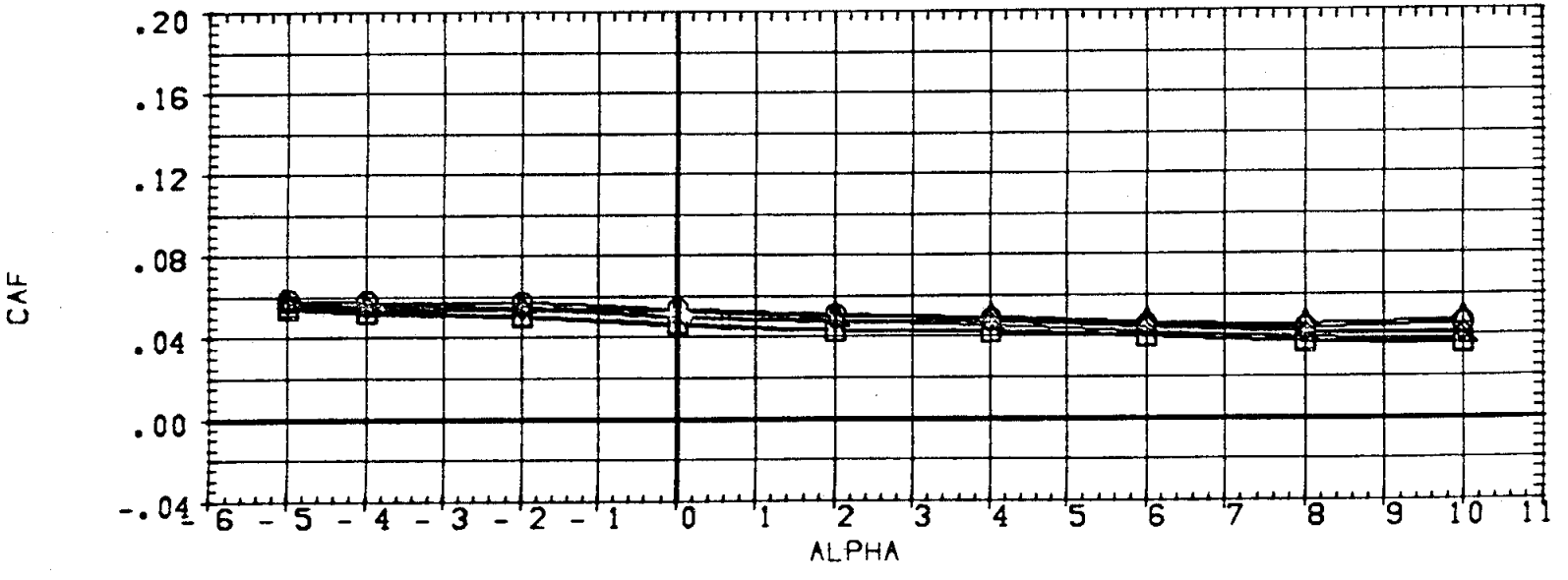
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72129)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624
(A72130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.120	10.000	-.624
(A72131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.120	10.000	-.624
(A72132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.240	10.000	-.624
(A72133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.240	10.000	-.624
(A72134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



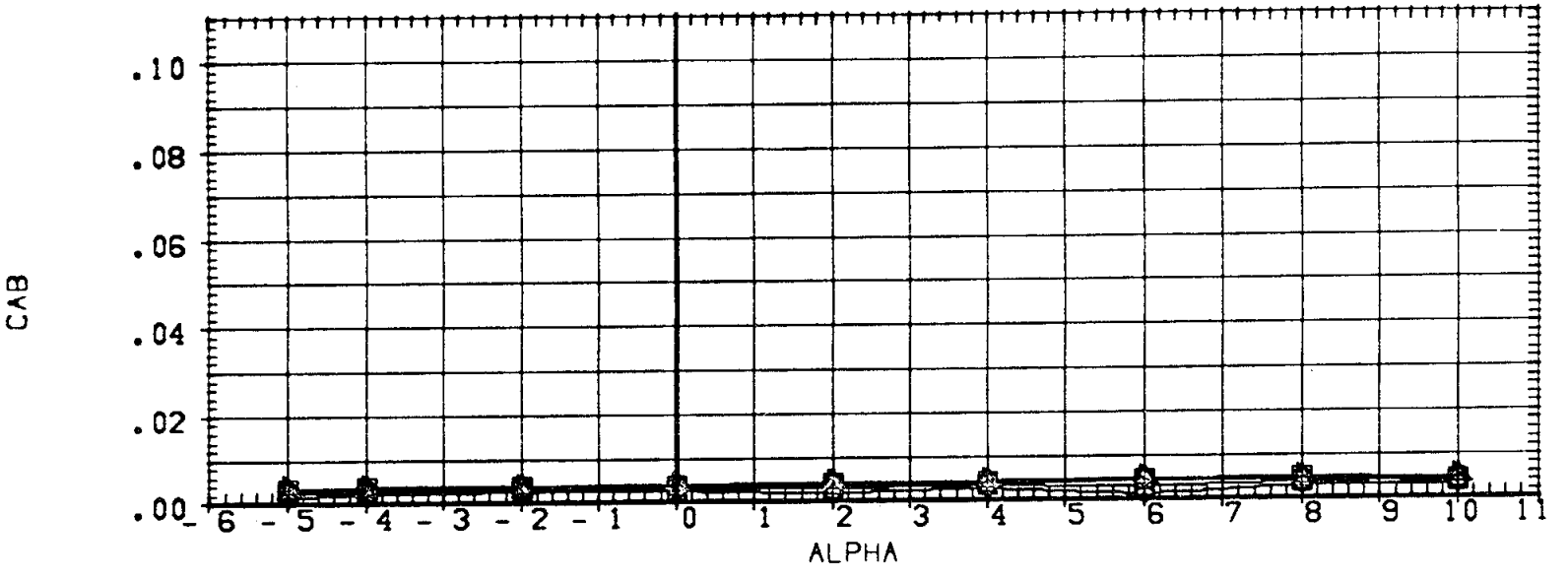


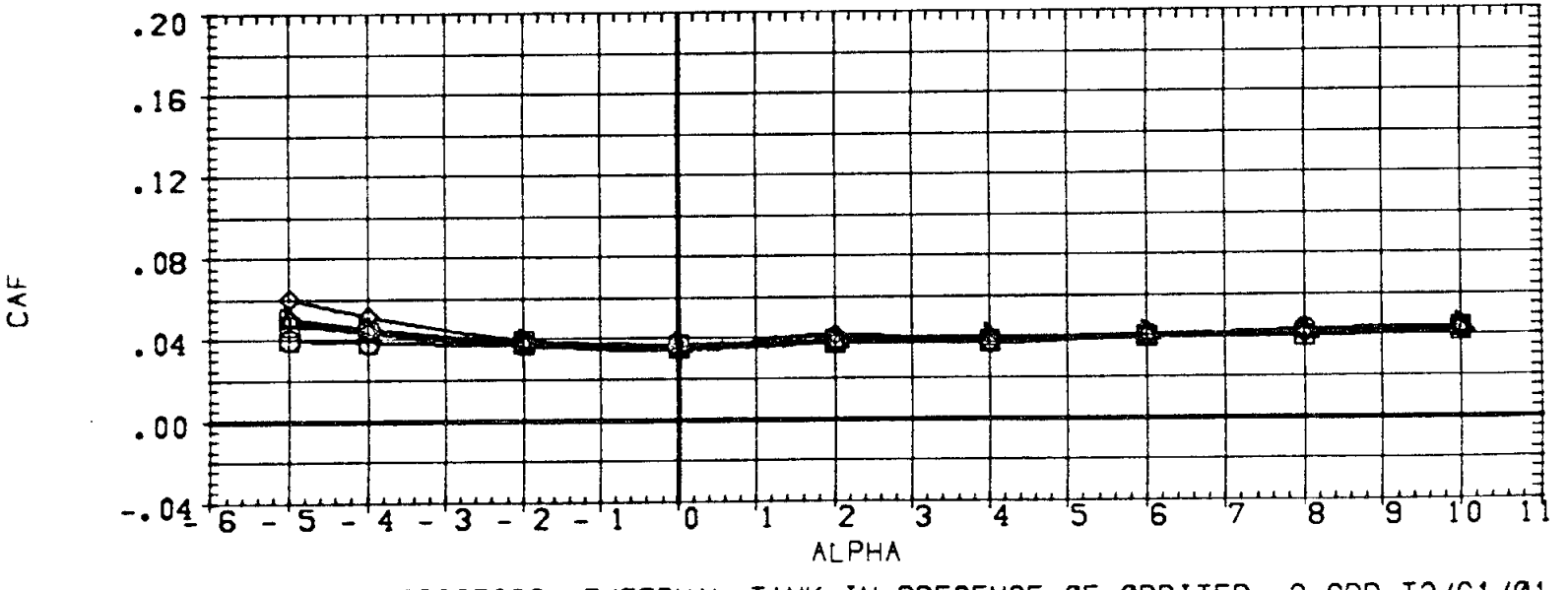
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72129)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624
(A72130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.120	10.000	-.624
(A72131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.120	10.000	-.624
(A72132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.240	10.000	-.624
(A72133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	-1.200	.240	10.000	-.624
(A72134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



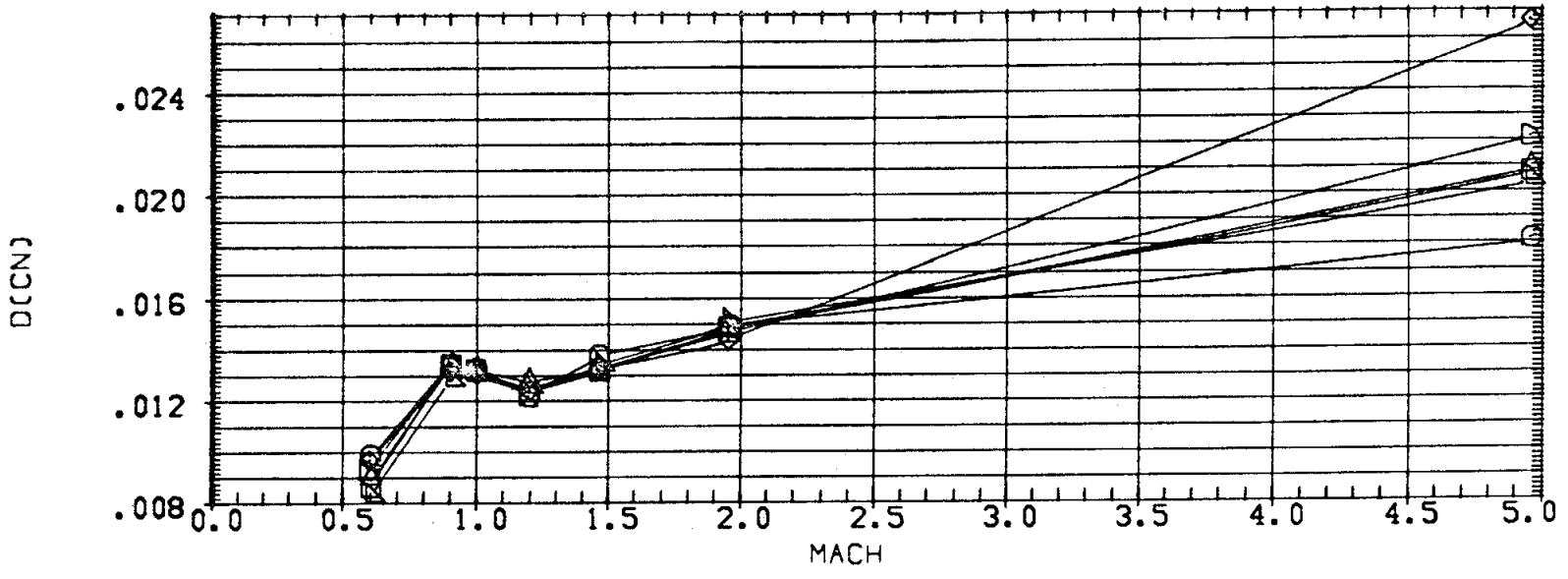


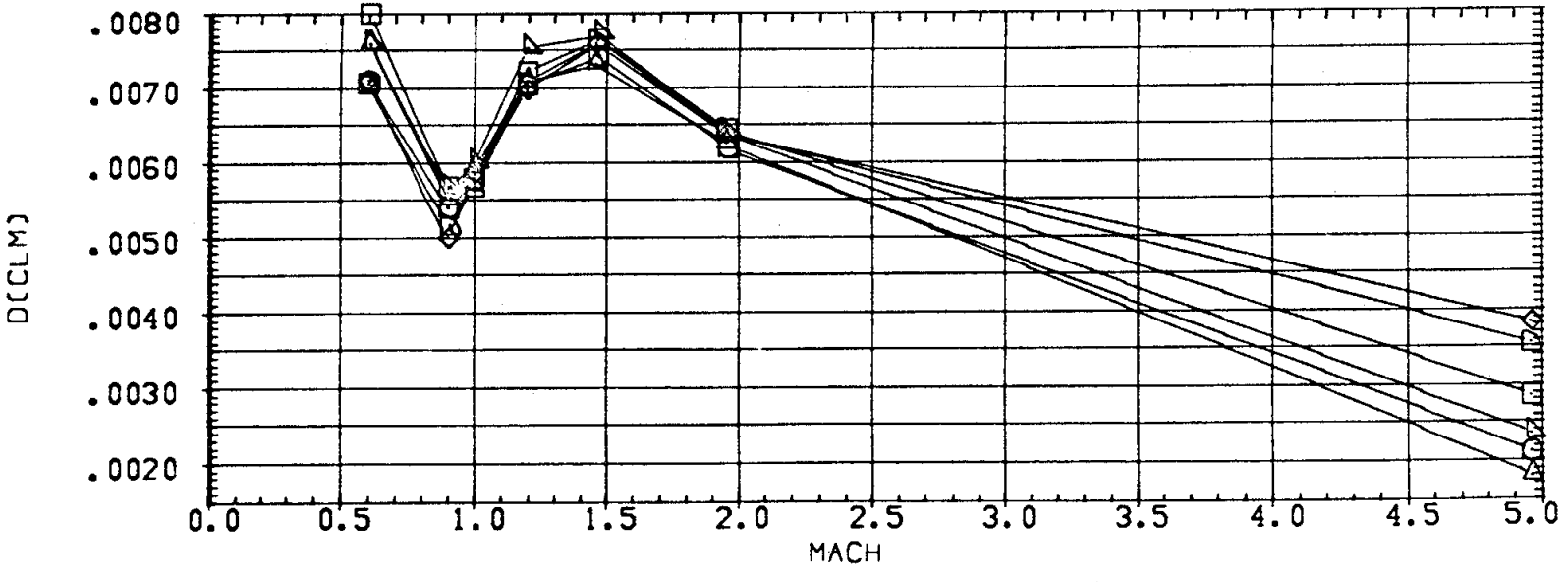
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(872129)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	-.624
(872130)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	-.624
(872131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(872132)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.240	10.000	-.624
(872133)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.240	10.000	-.624
(872134)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



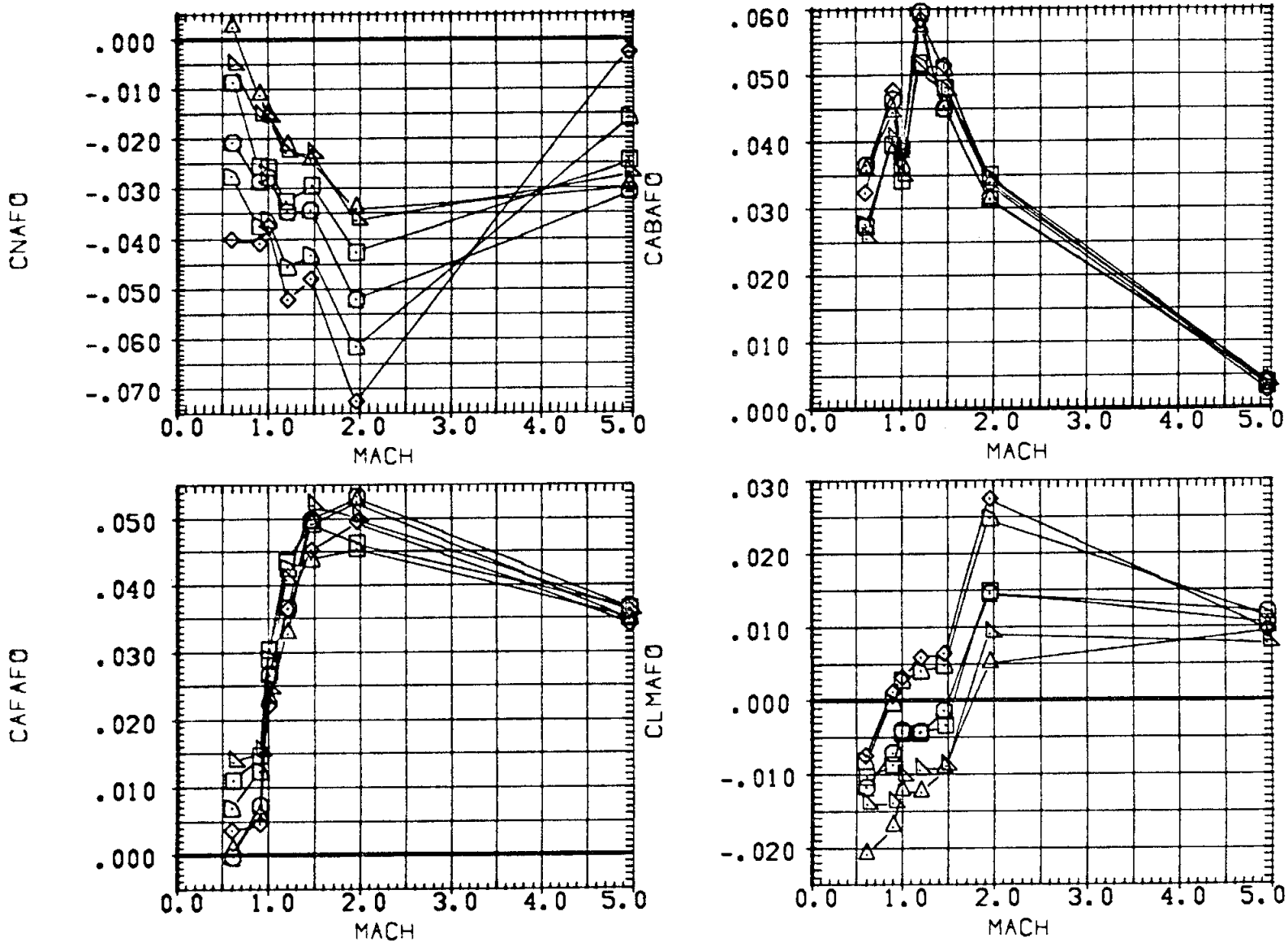


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(872129)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872130)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872131)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872132)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872133)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)
(872134)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	-.624
-1.200	.120	10.000	-.624
1.500	.120	10.000	-.624
.000	.240	10.000	-.624
-1.200	.240	10.000	-.624
1.500	.240	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

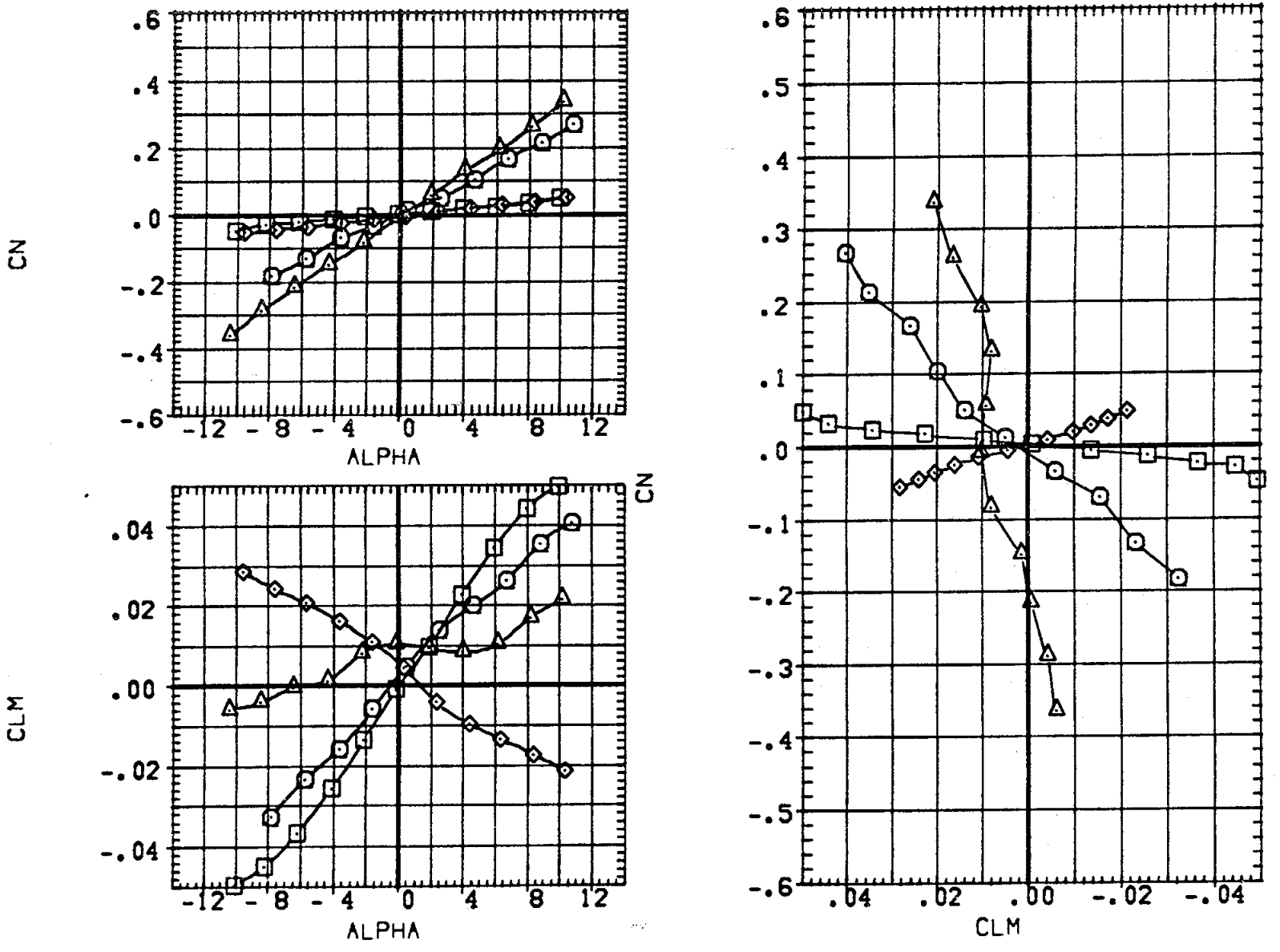


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72145)	○	MSFC 545 (IA1) MOD ATP LV-(TS)(S1/2)/(S1/2)
(A72701)	△	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

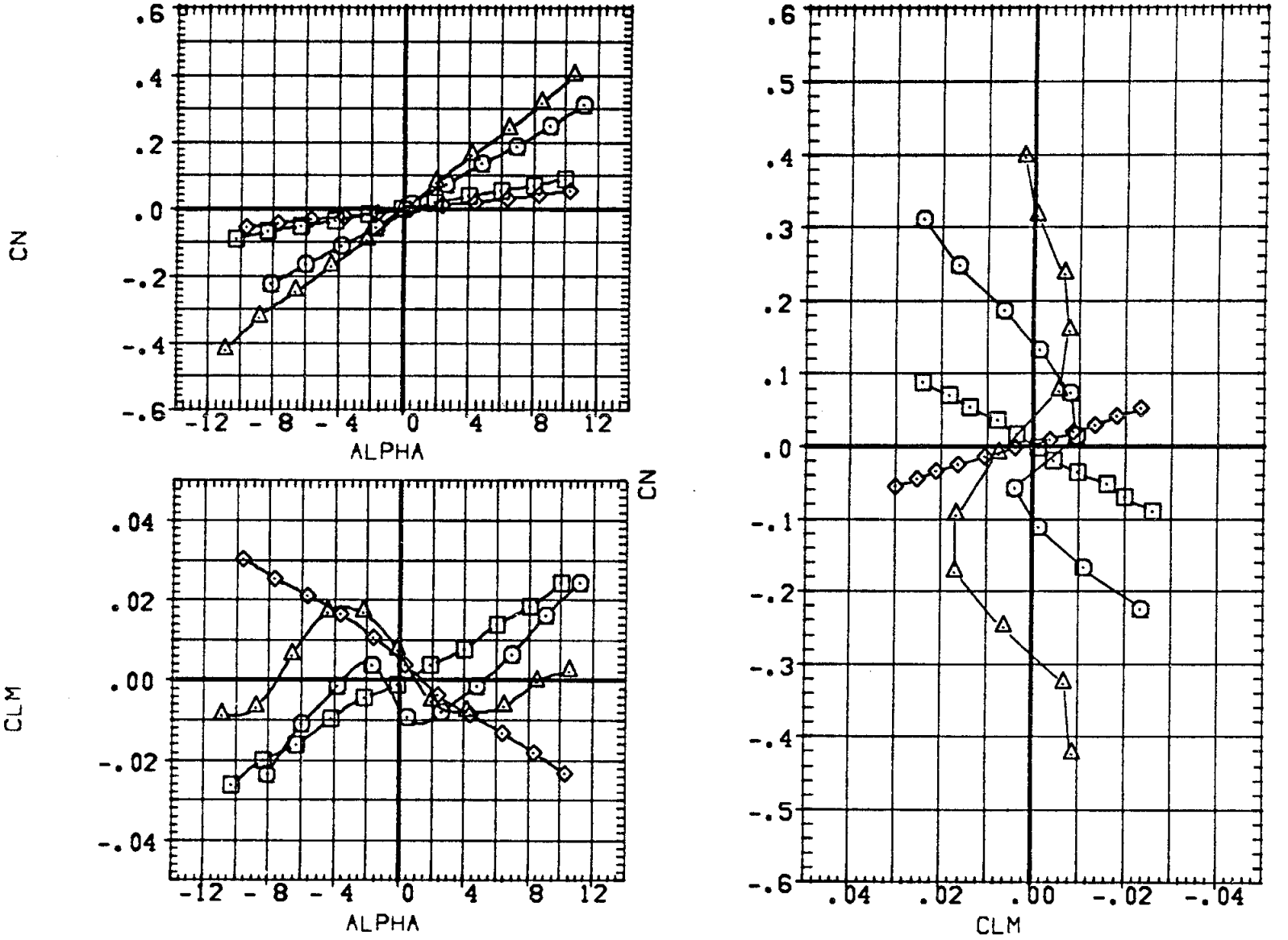


STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2143)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(AP2701)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(AP2201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(AP2601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



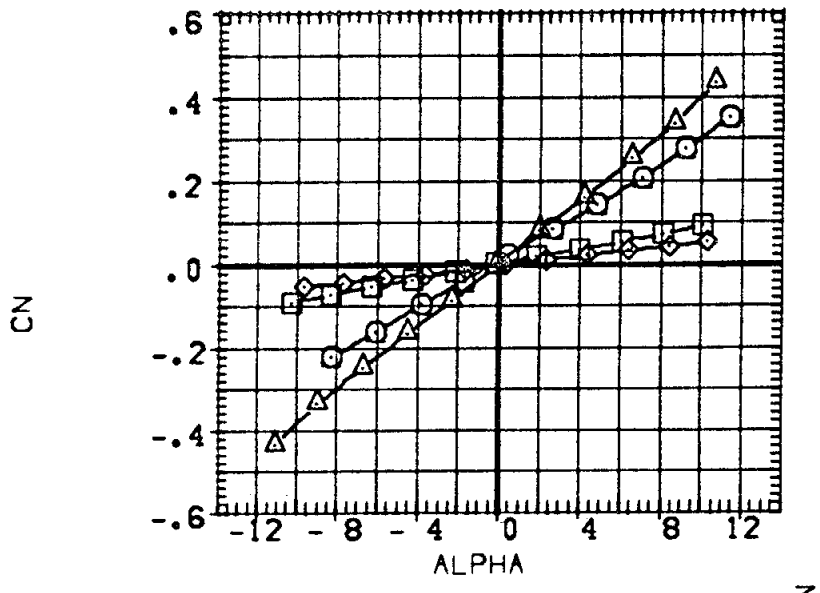
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

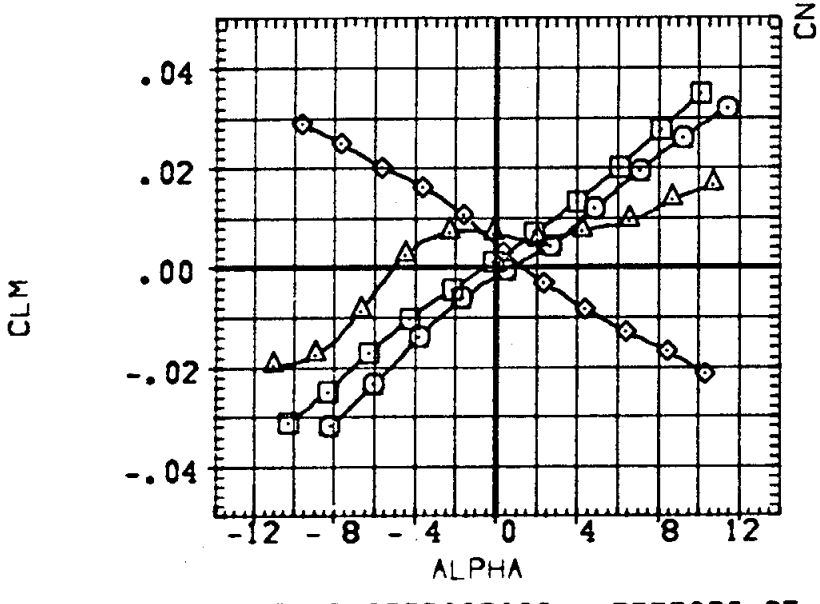
(B)MACH = .90

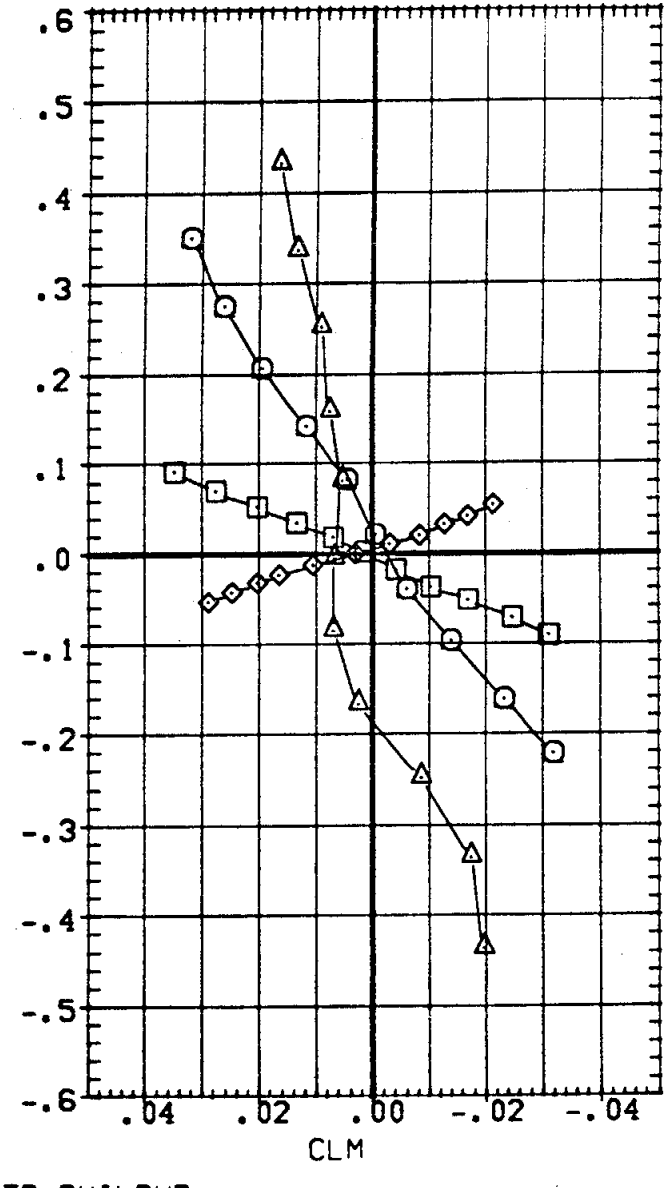
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72143)	○	MSFC 545 (IA1) MOD ATP LV-(TS)(S1/2)/(S1/2)
(A72701)	△	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







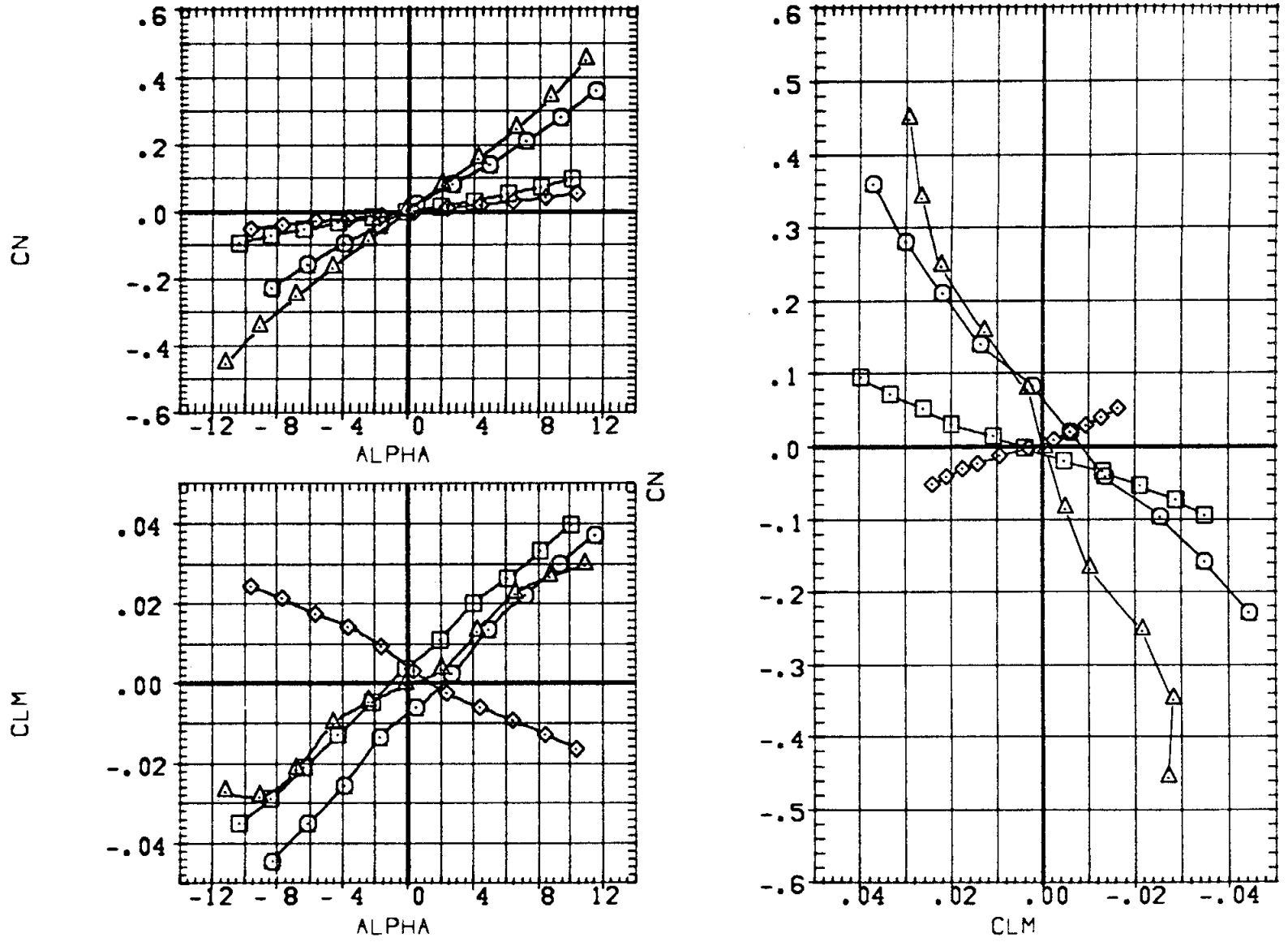
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

(C)YACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AY2143)	○	MSFC 545 (IA1) MOD ATP LV-(TS)(S1/2)/(S1/2)
(AY2701)	△	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(AY2201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(AY2601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



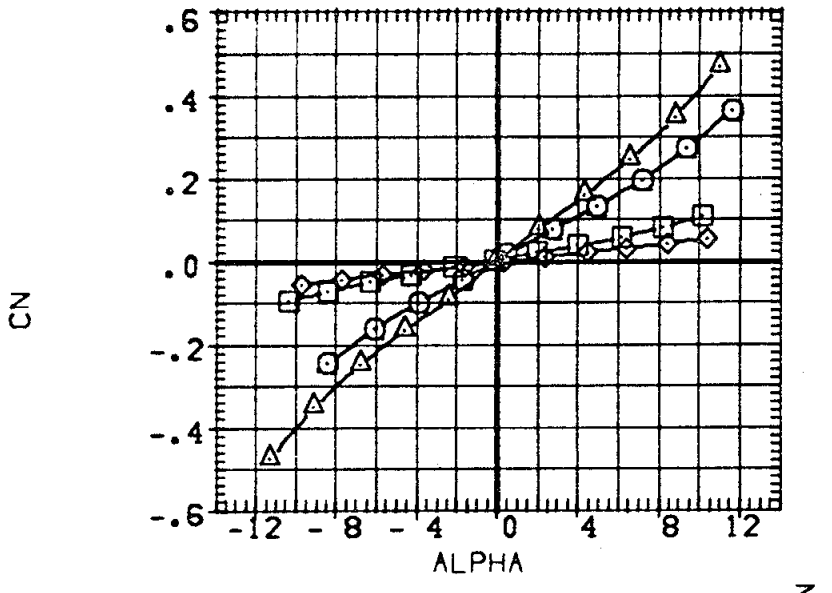
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

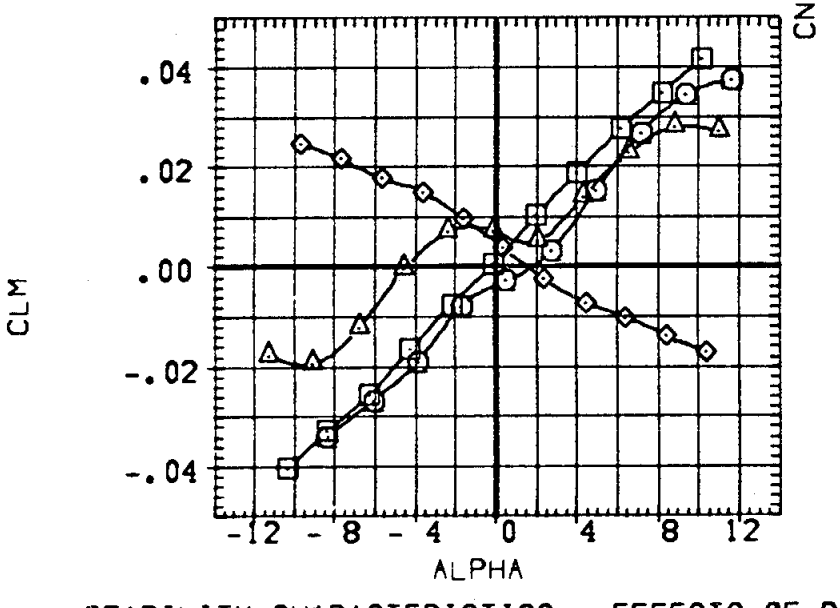
(D)MACH = 1.20

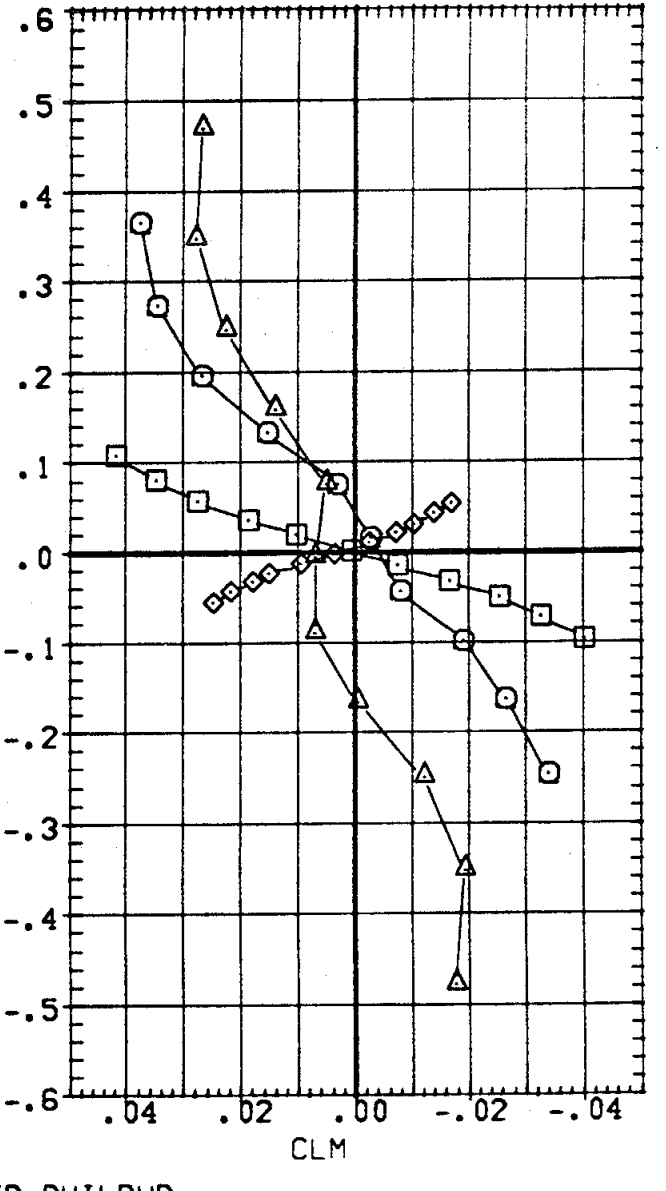
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72143)	○	MSFC 545 (IA1) MOD ATP LV-(TS)(S1/2)/(S1/2)
(A72701)	△	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







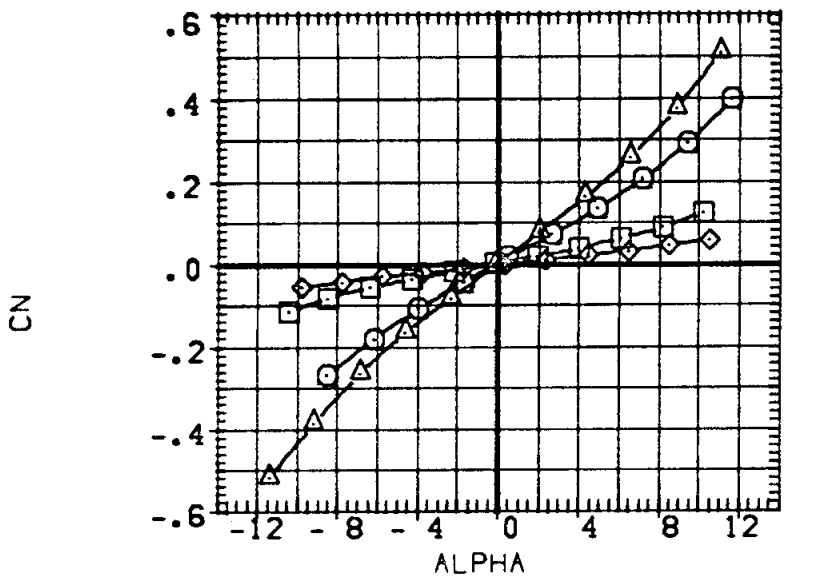
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

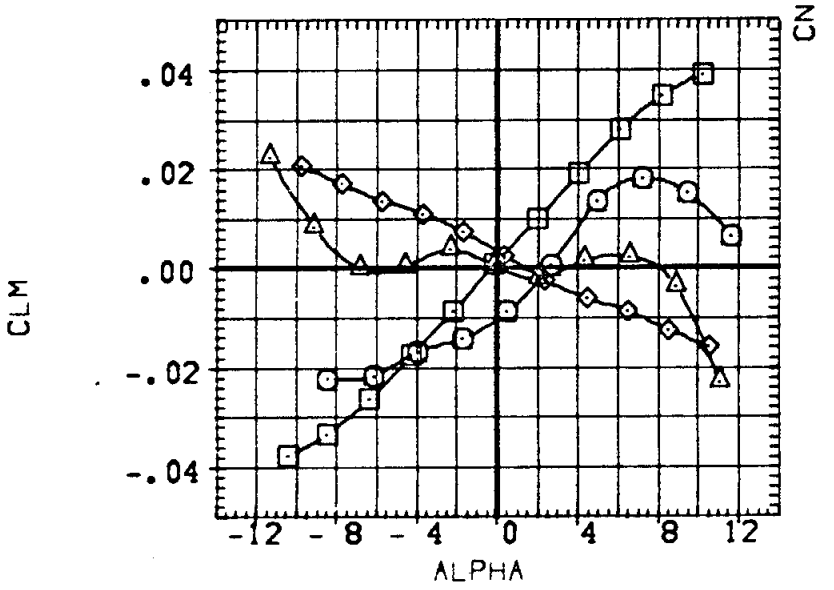
(E)MACH = 1.46

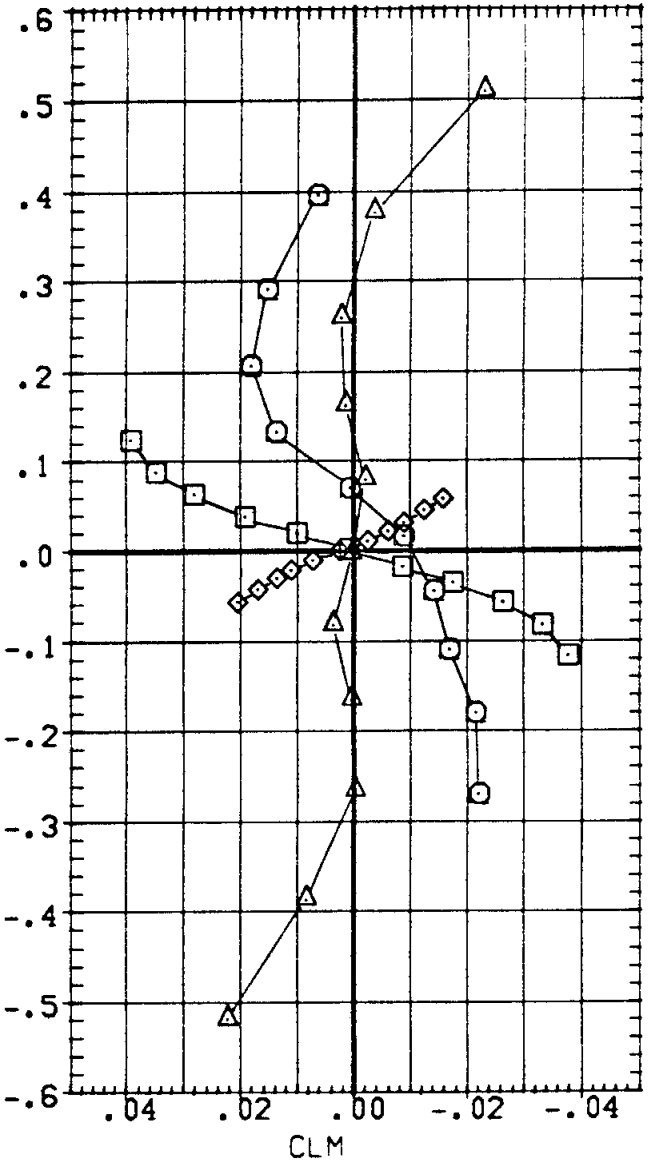
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72143)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(A72701)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







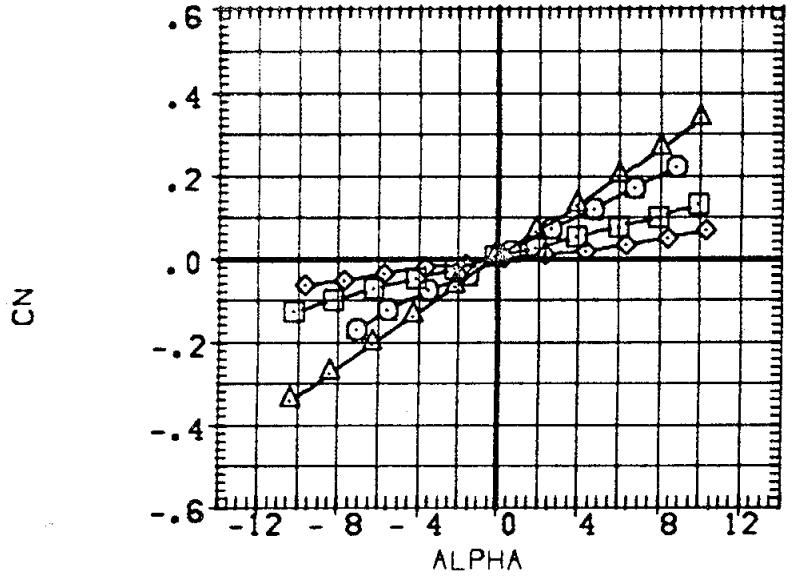
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

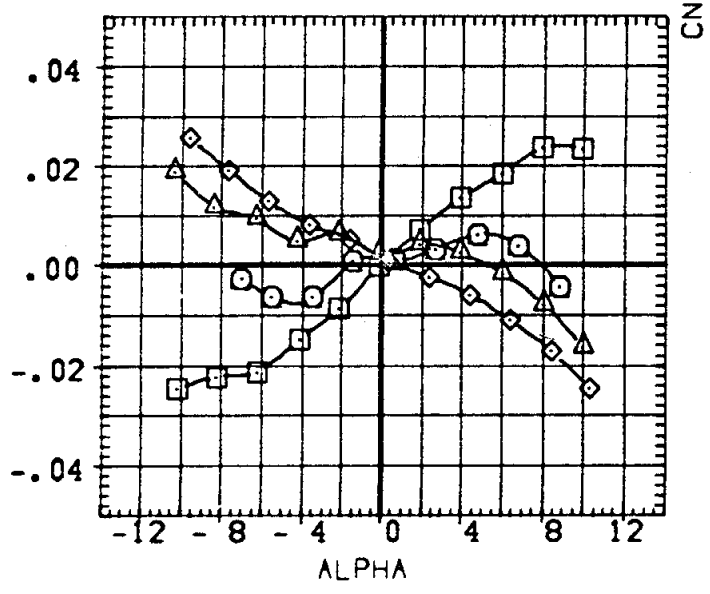
(F)MACH = 1.97

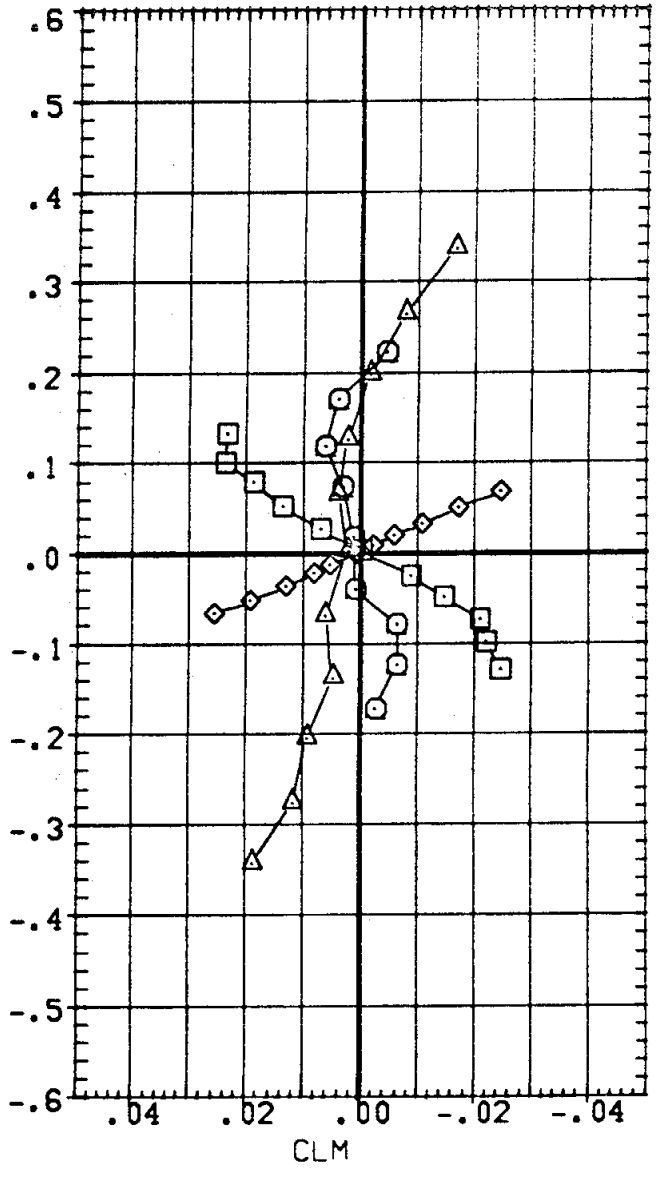
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72143)	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(A72701)	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72201)	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(A72601)	MSFC 545 (IA1) NAR ATP BL LV-(T3)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







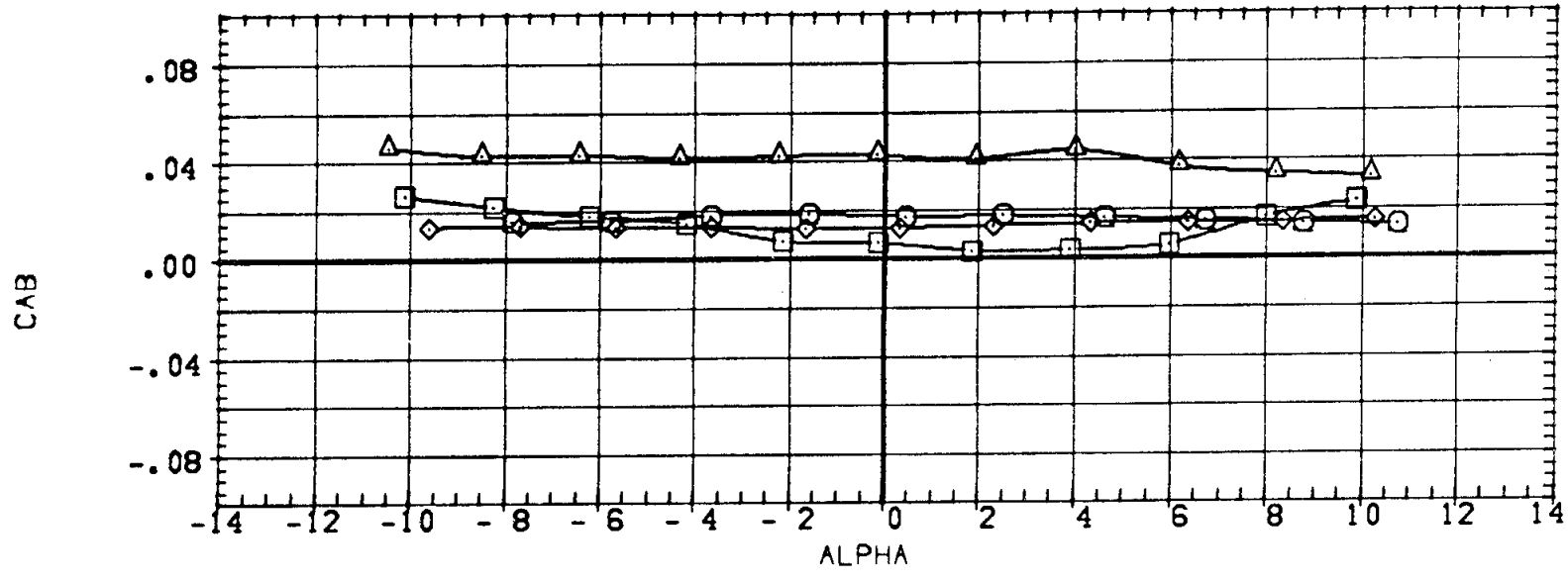
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

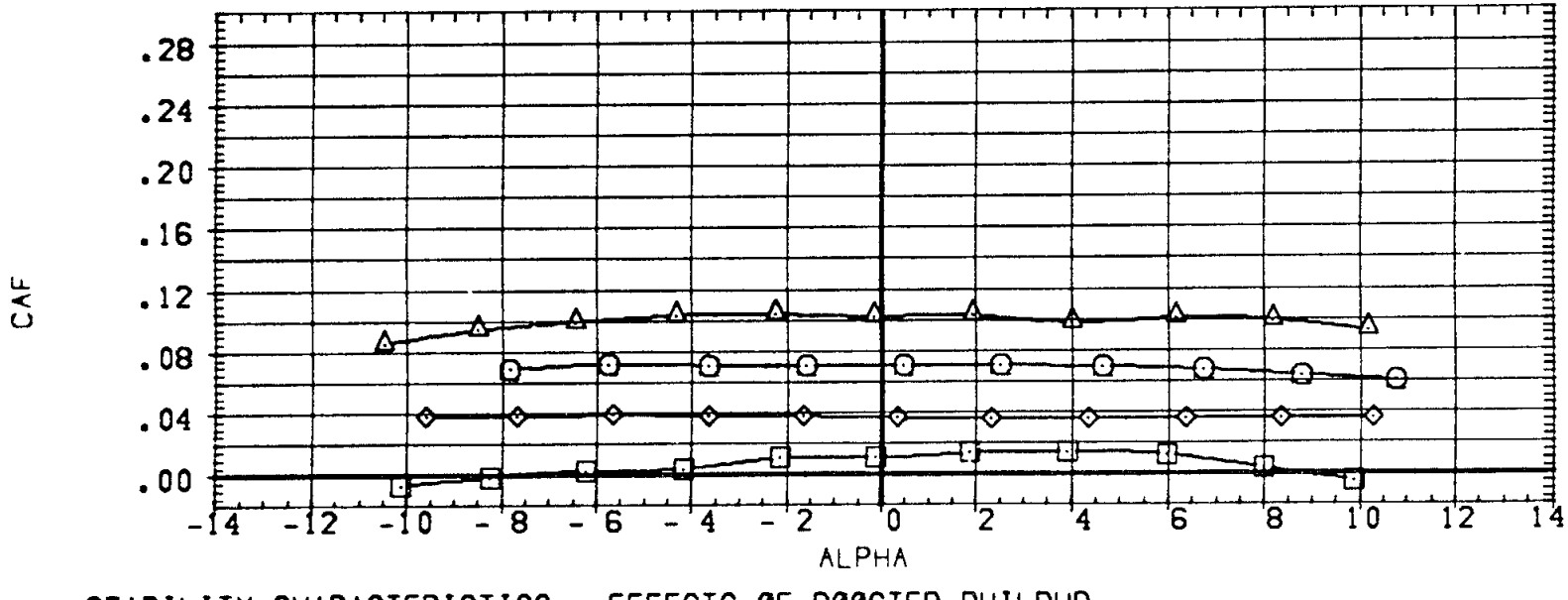
(G)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72143)	MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(A72701)	MSFC 545 (1A1) NAR ATP BL LV-(T3)(S1)
(A72201)	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)
(A72601)	MSFC 545 (1A1) NAR ATP BL LV-(T3)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

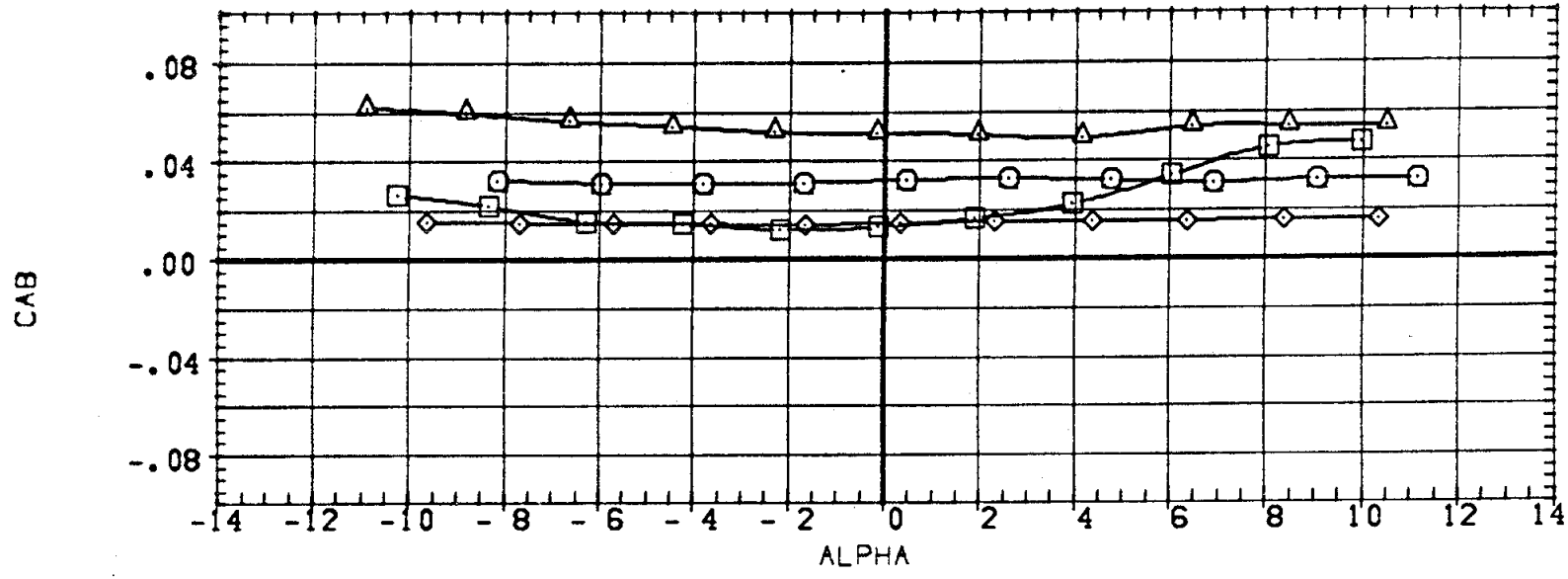
(A)MACH = .60

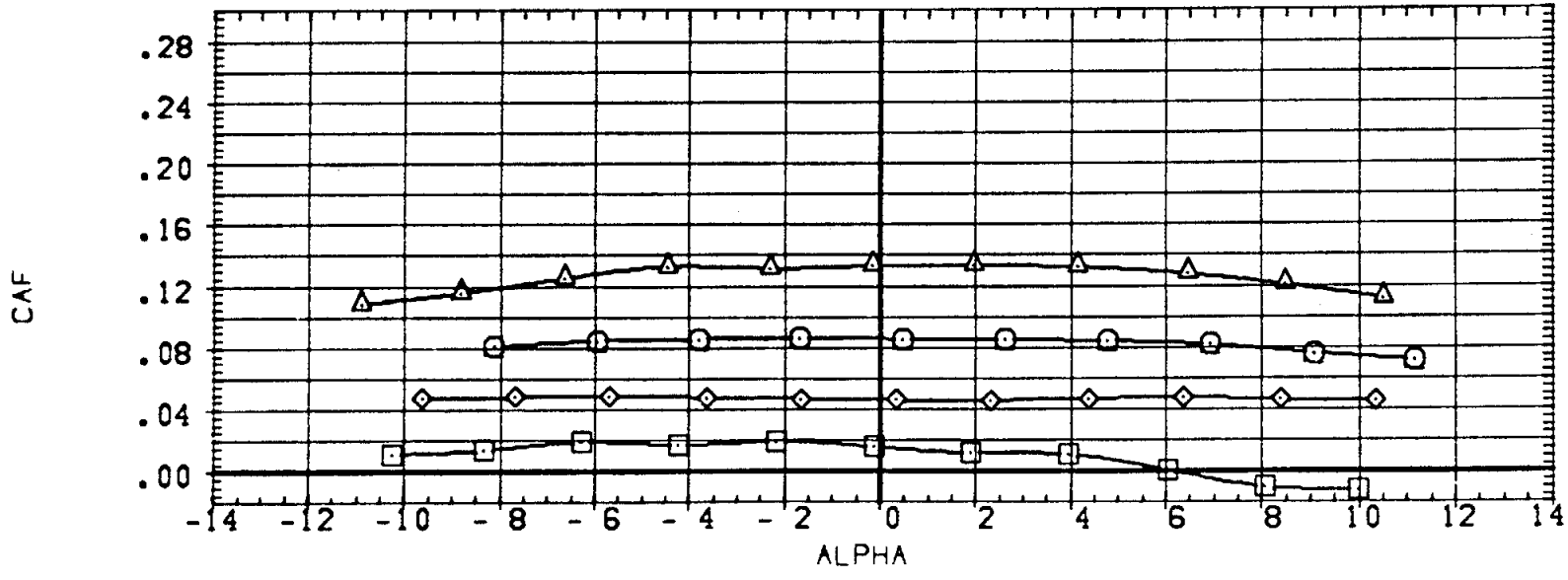
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A72143)	○	MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(A72701)	△	MSFC 545 (1A1) NAR ATP BL LV-(T3)(S1)
(A72201)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)
(A72601)	□	MSFC 545 (1A1) NAR ATP BL LV-(T3)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





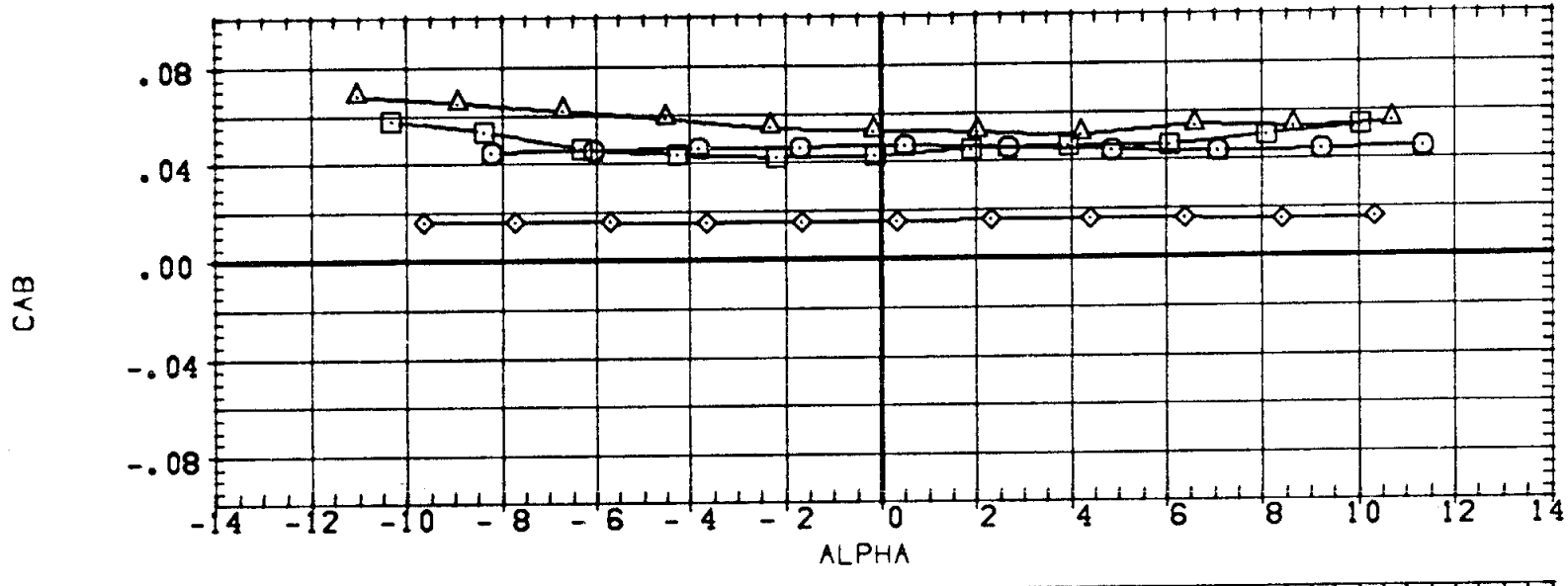
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

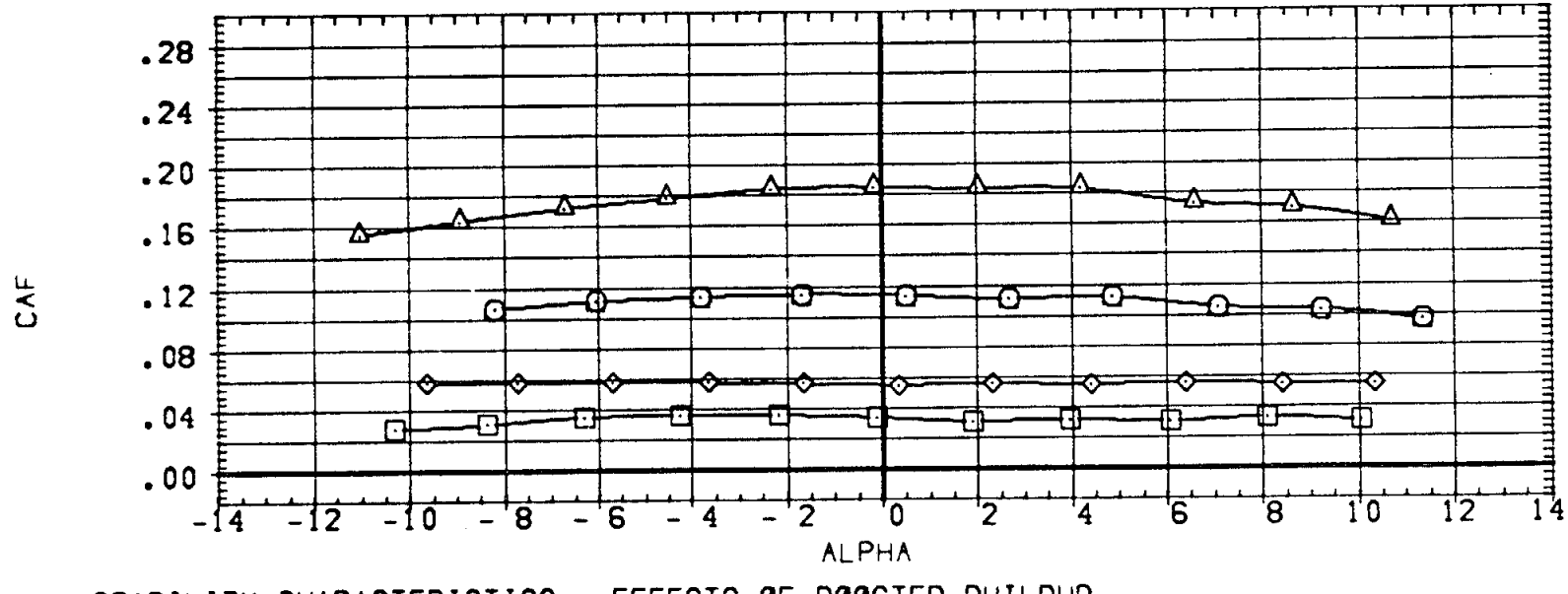
(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72143)	○	MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(A72701)	△	MSFC 545 (1A1) NAR ATP BL LV-(T3)(S1)
(A72201)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)
(A72601)	□	MSFC 545 (1A1) NAR ATP BL LV-(T3)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

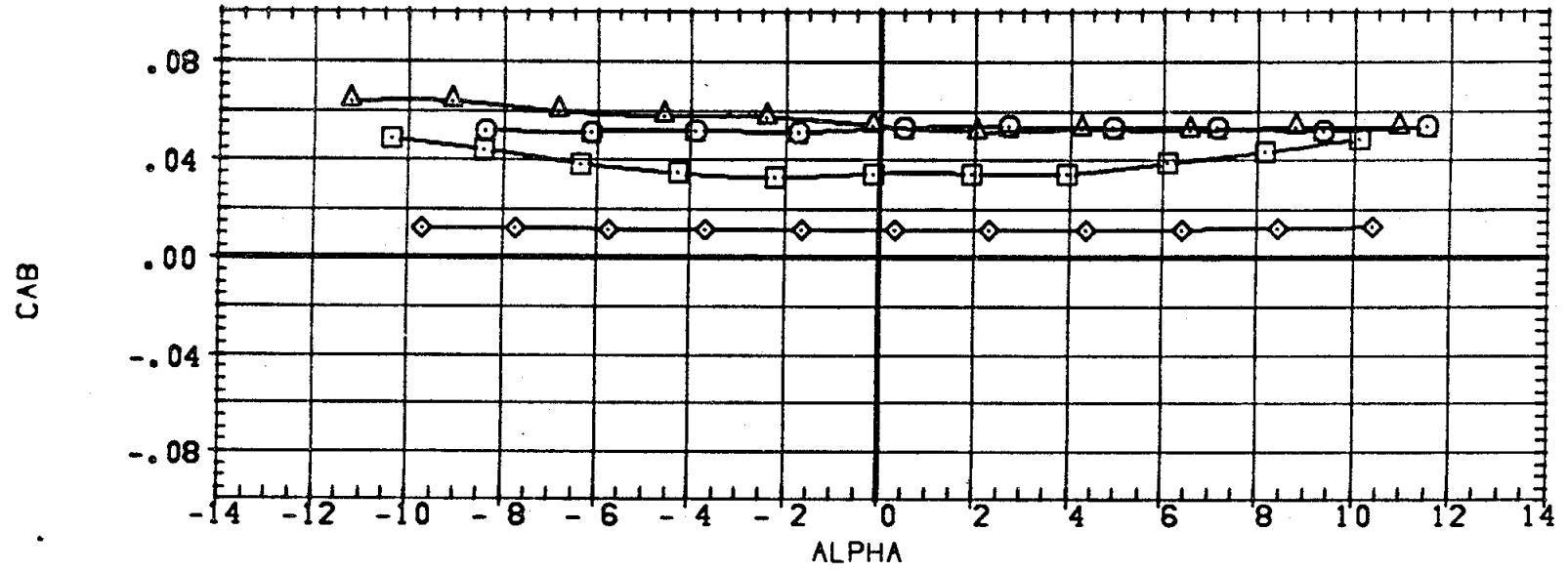
(C)MACH = 1.00

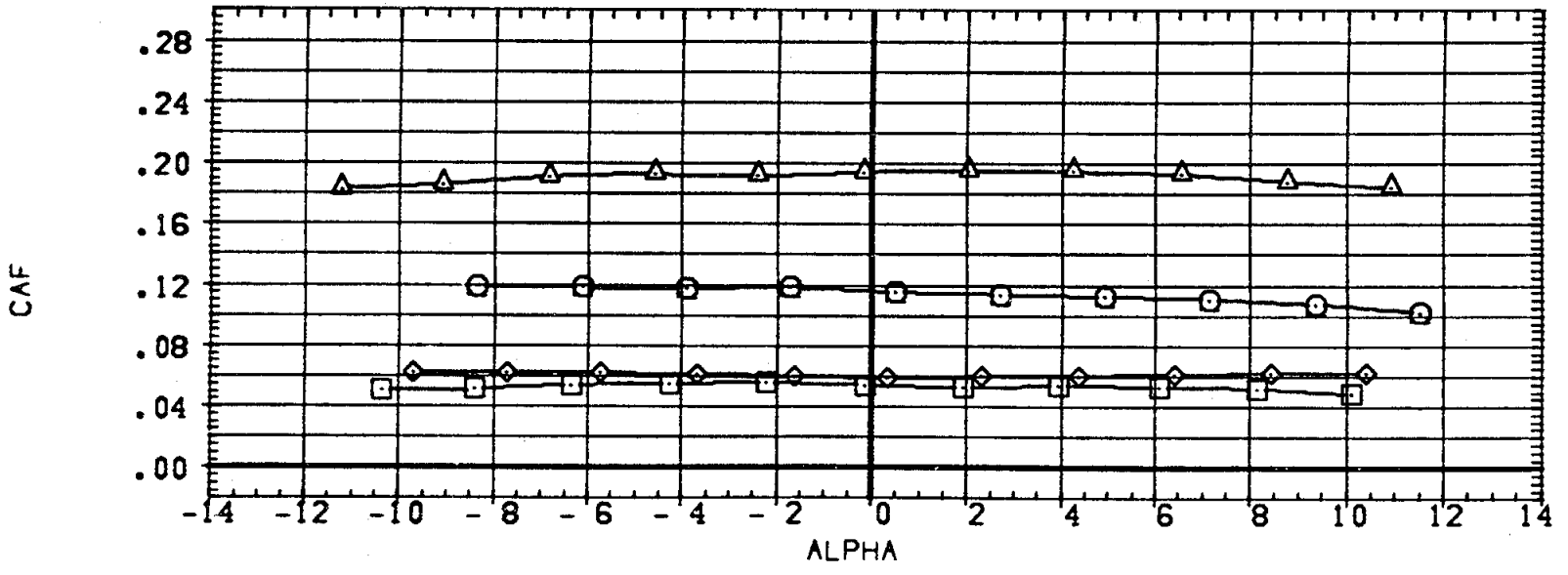
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A72105)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(A72701)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





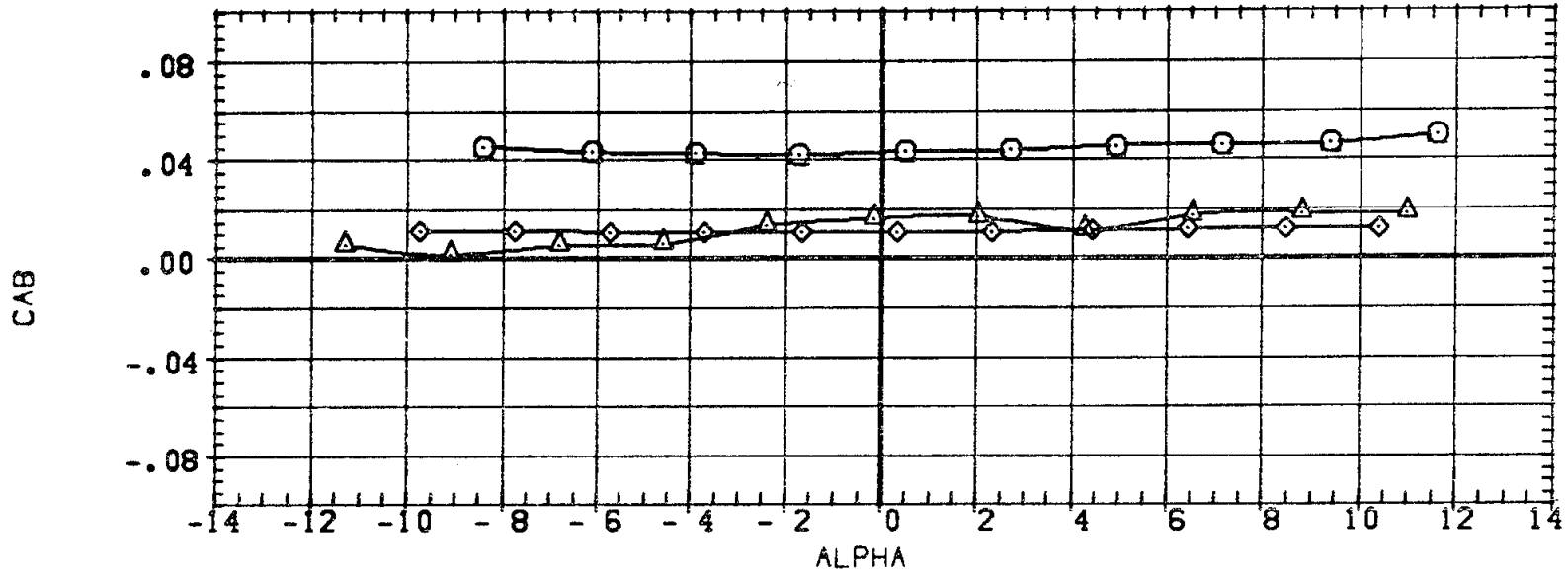
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

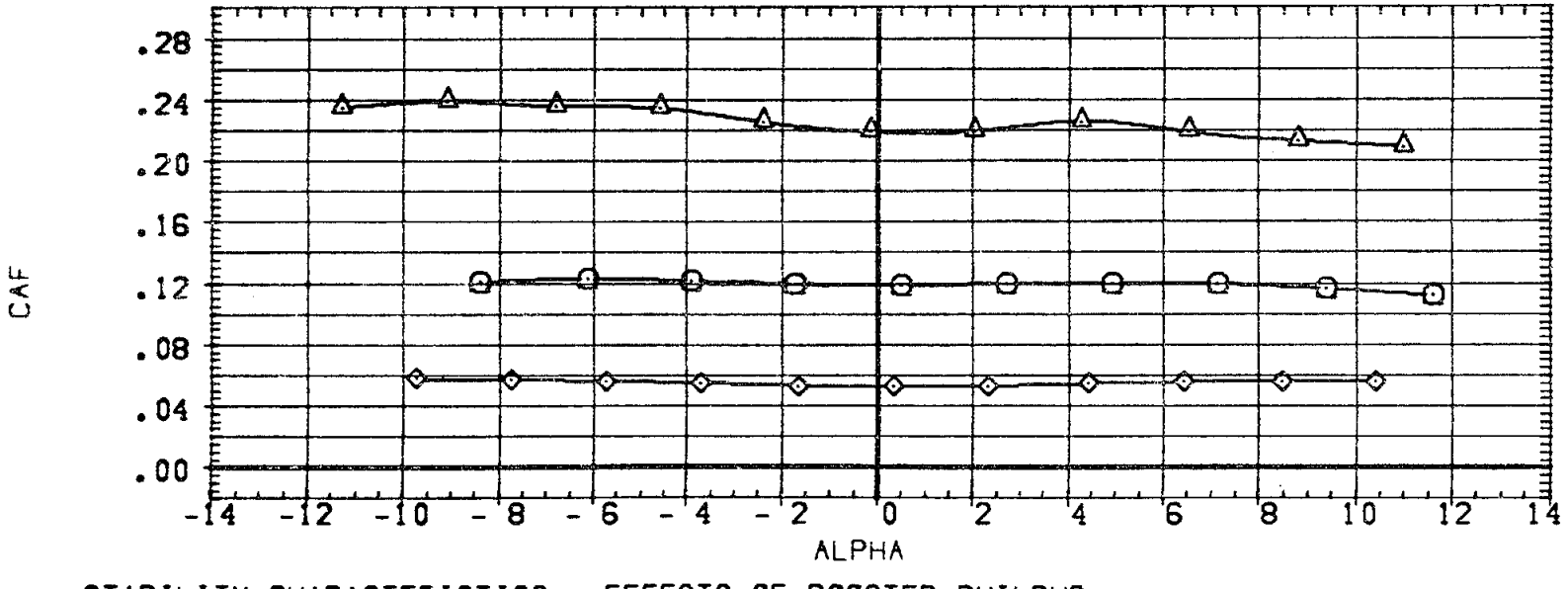
(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72143)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(A72701)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

(E)MACH = 1.46

DATA SET SYMBOL CONFIGURATION DESCRIPTION

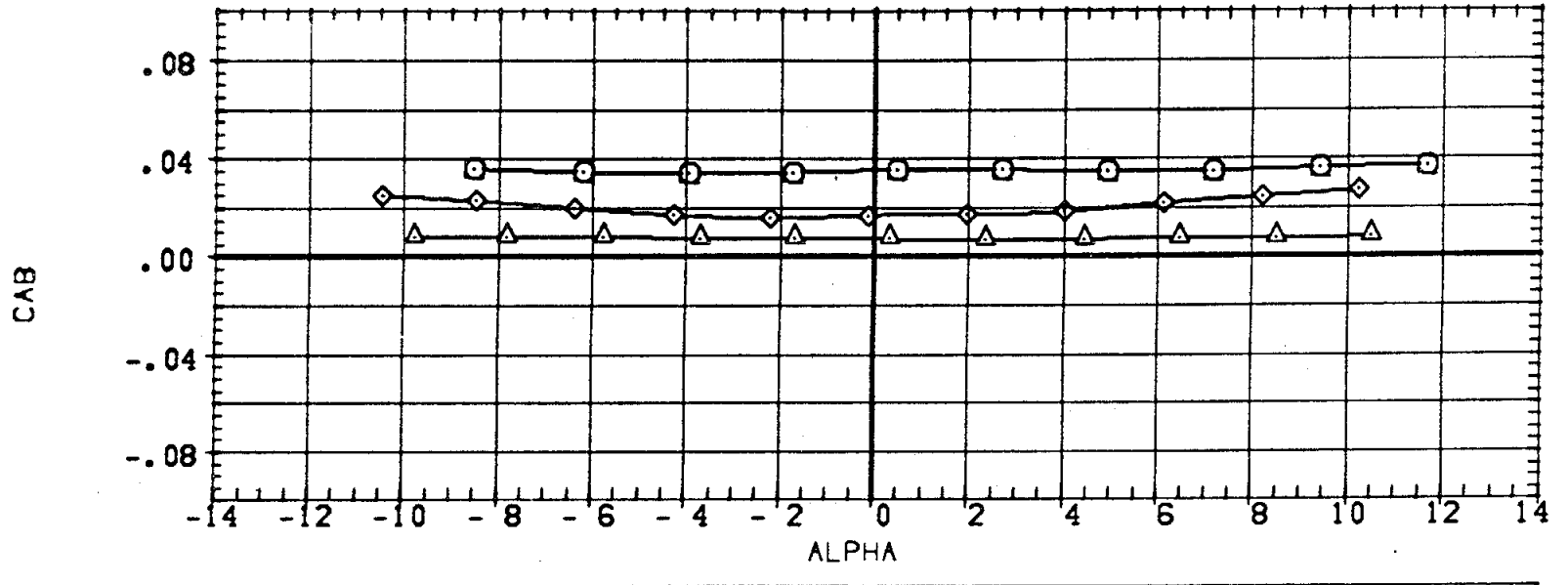
(A72143) ○ MSFC 545 (IA1) MOD ATP LV-(TS)(S1/2)/(S1/2)

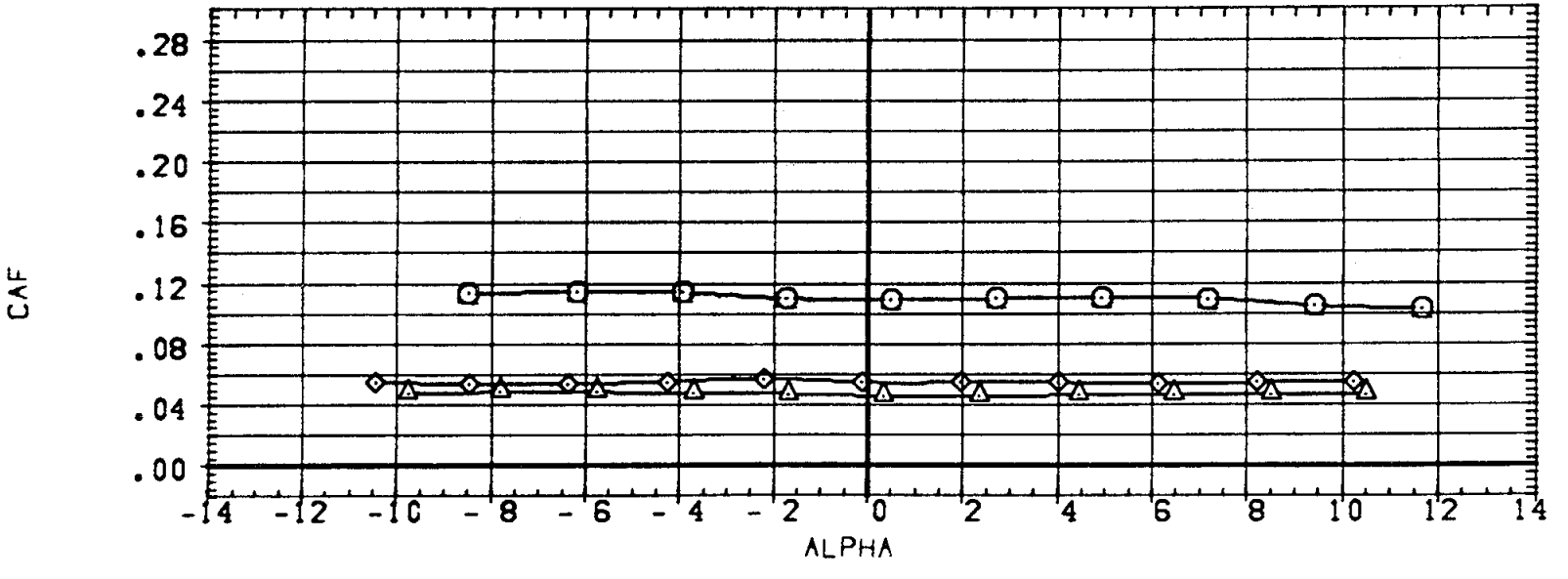
(A72201) △ MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

(A72601) ◇ MSFC 545 (IA1) NAR ATP BL LV-(TS)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



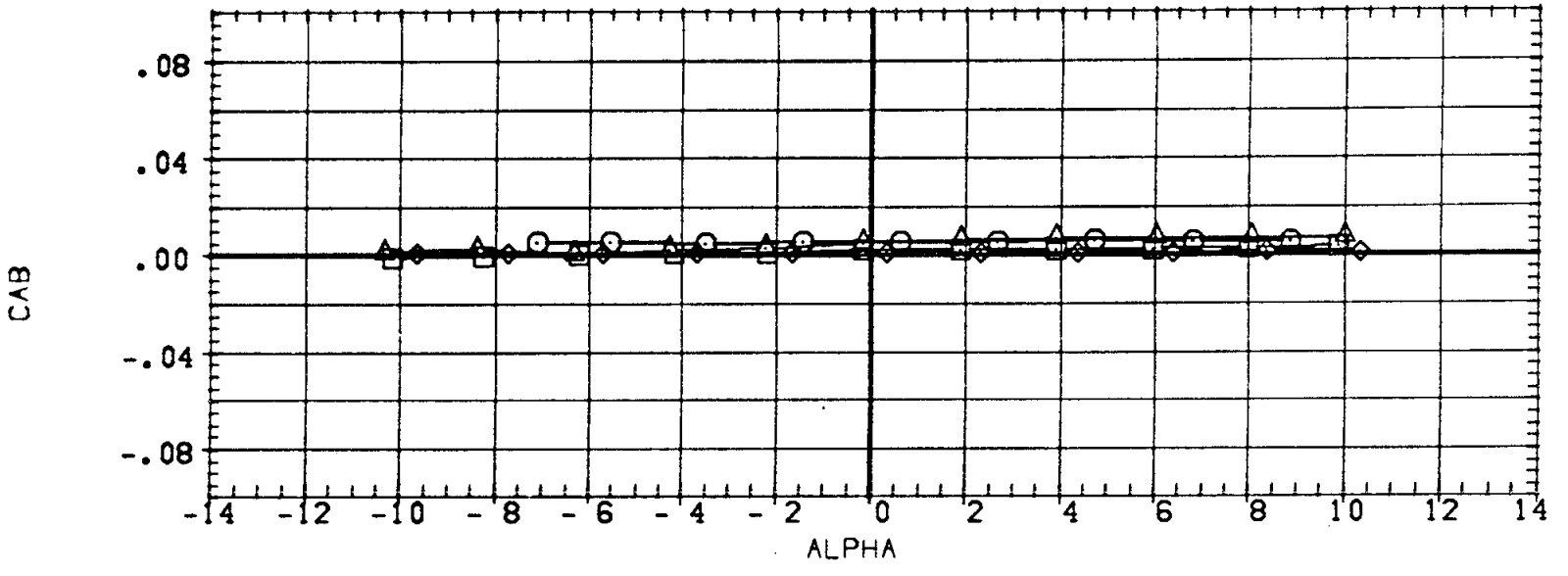


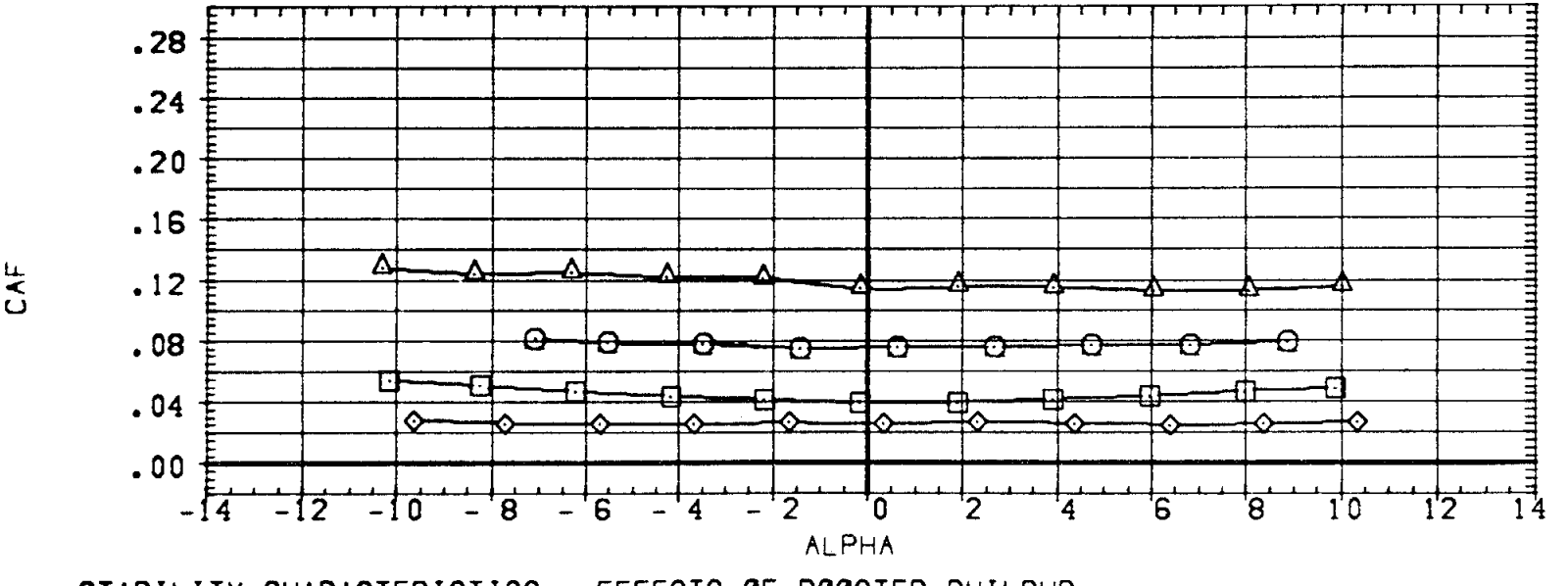
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

(F)MACH = 1.97

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AY2143)	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(AY2701)	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(AY2201)	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(AY2601)	MSFC 545 (IA1) NAR ATP BL LV-(T3)

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

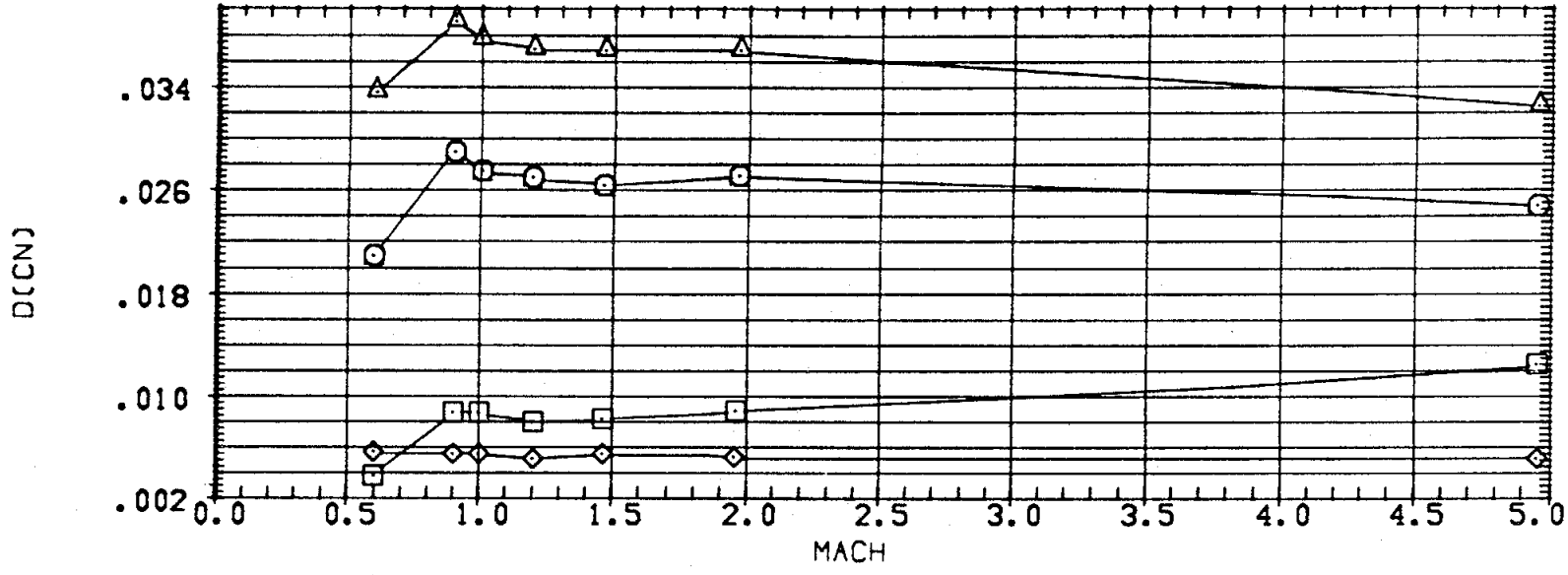
(G)MACH = 4.96

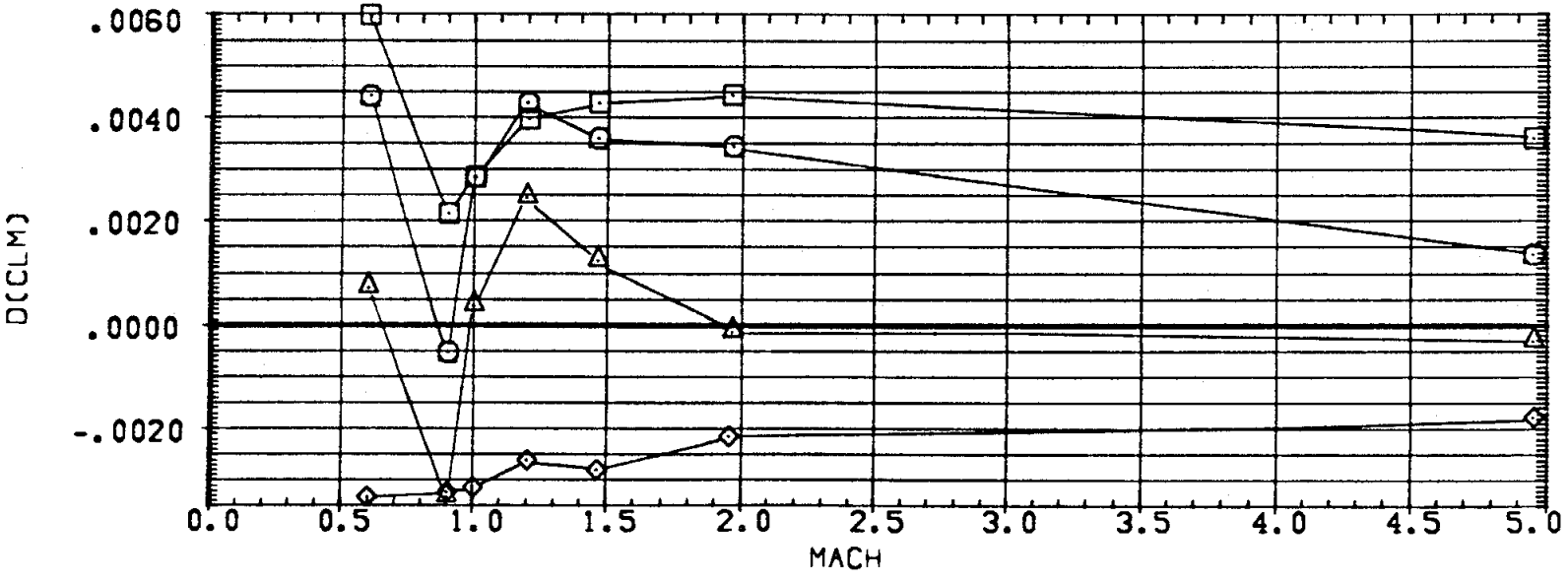
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(872143)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(872701)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(872201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)
(872601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

RUDDER AILRON RUDFLR ELEVTR

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





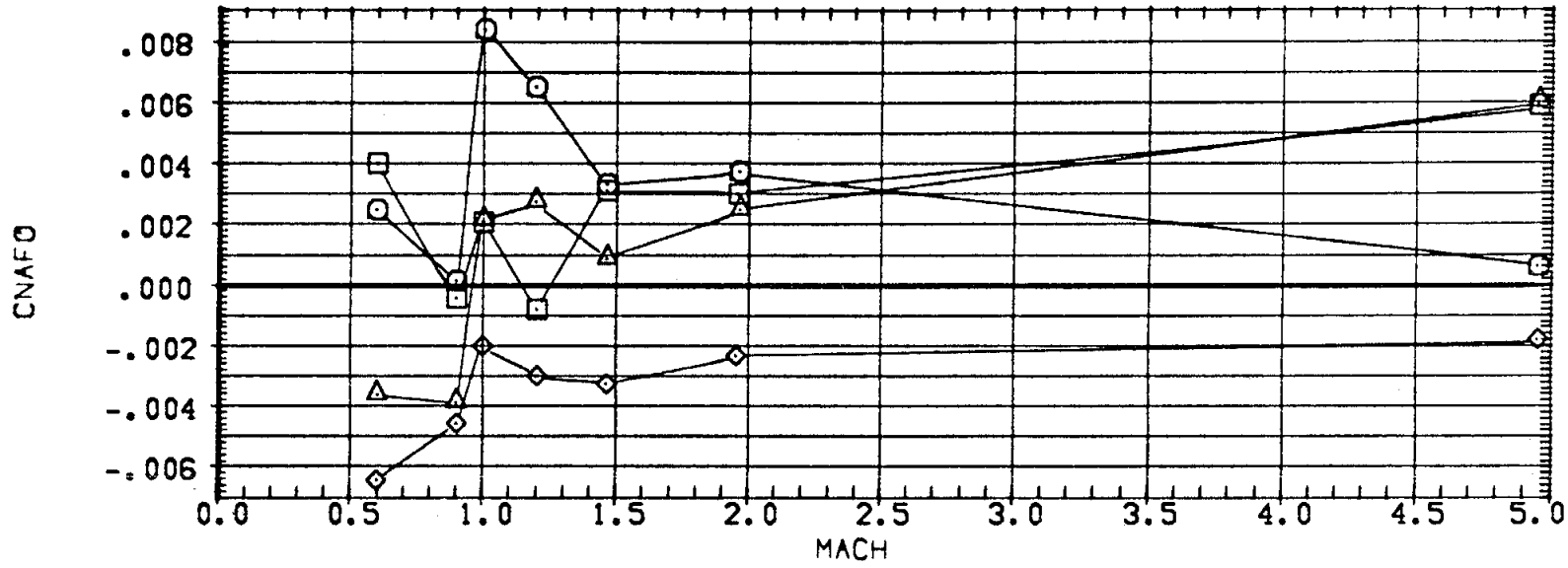
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

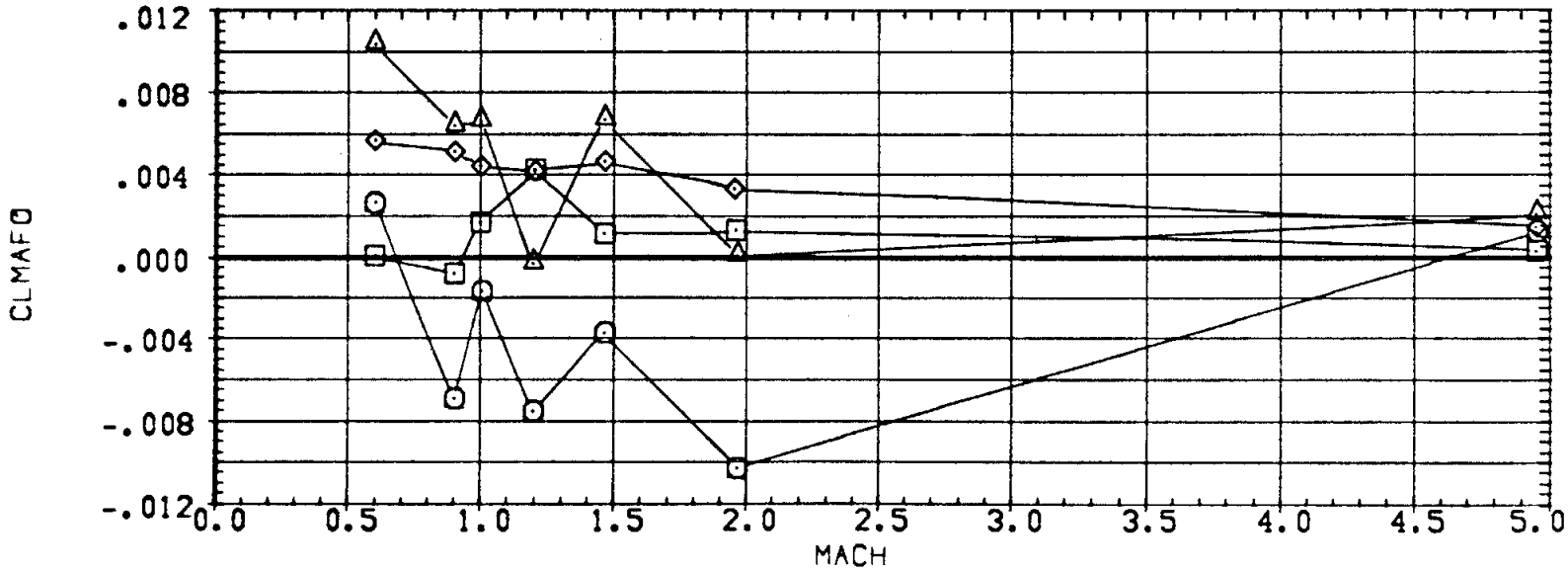
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(872143)	○	MSFC 545 (1A1) MOD ATP LV-(TS)(S1/2)/(S1/2)
(872701)	△	MSFC 545 (1A1) NAR ATP BL LV-(TS)(S1)
(872201)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)
(872601)	□	MSFC 545 (1A1) NAR ATP BL LV-(TS)

RUDDER AILRON RUDFLR ELEVTR

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

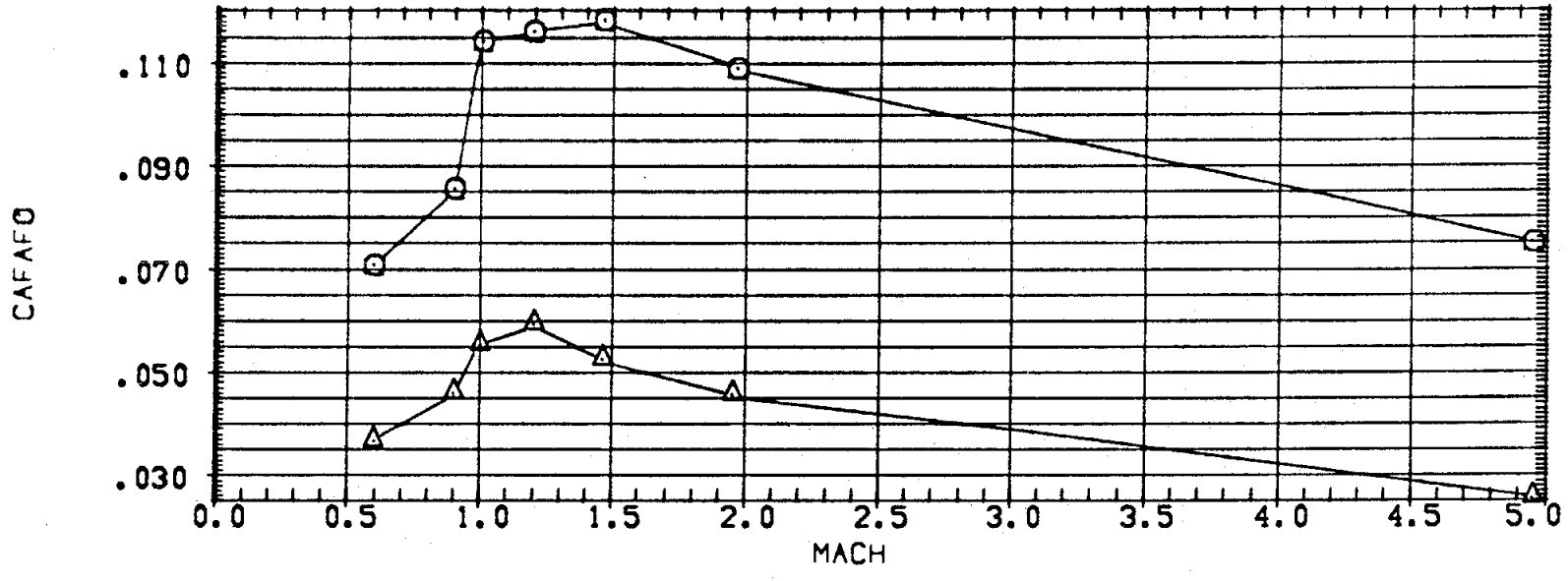


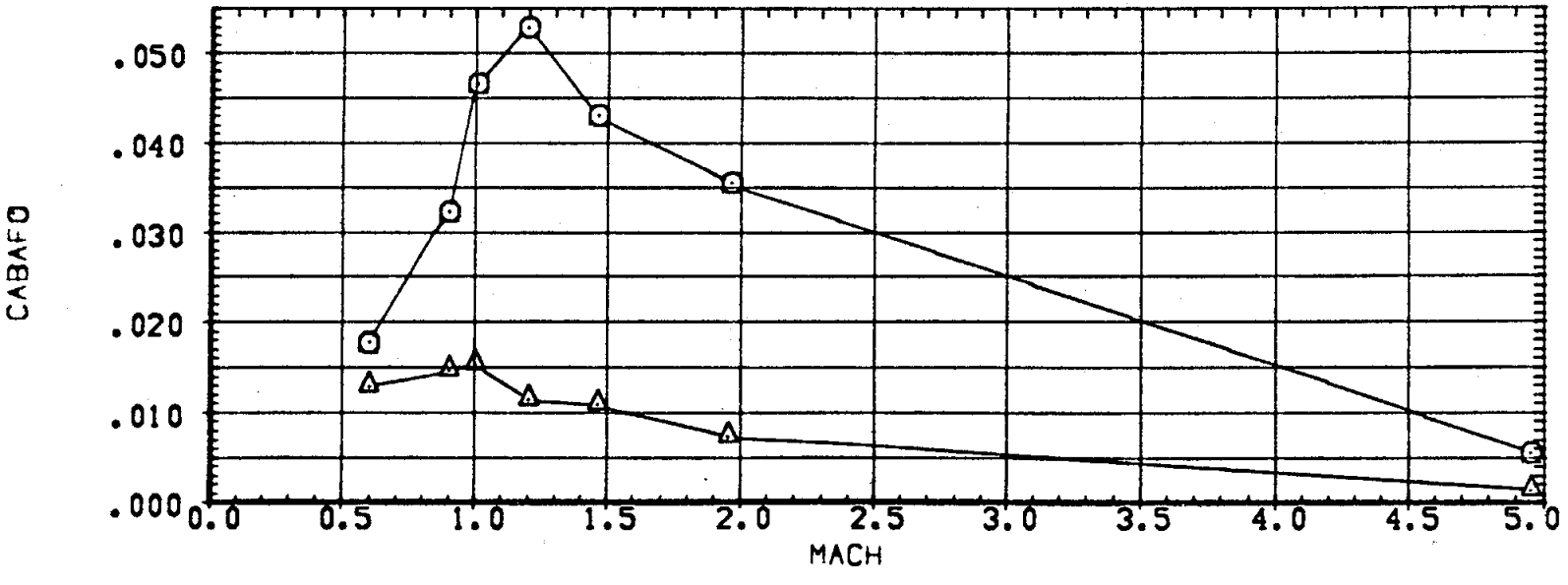


STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	AILRON	RUDFLR	ELEVTR
(872143)		MSFC S4S (IA1) MOD ATP LV-(TS)(S1/2)/(S1/2)				
(872201)		MSFC S4S (IA1) NAR ATP BL SRB-(S1/2)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





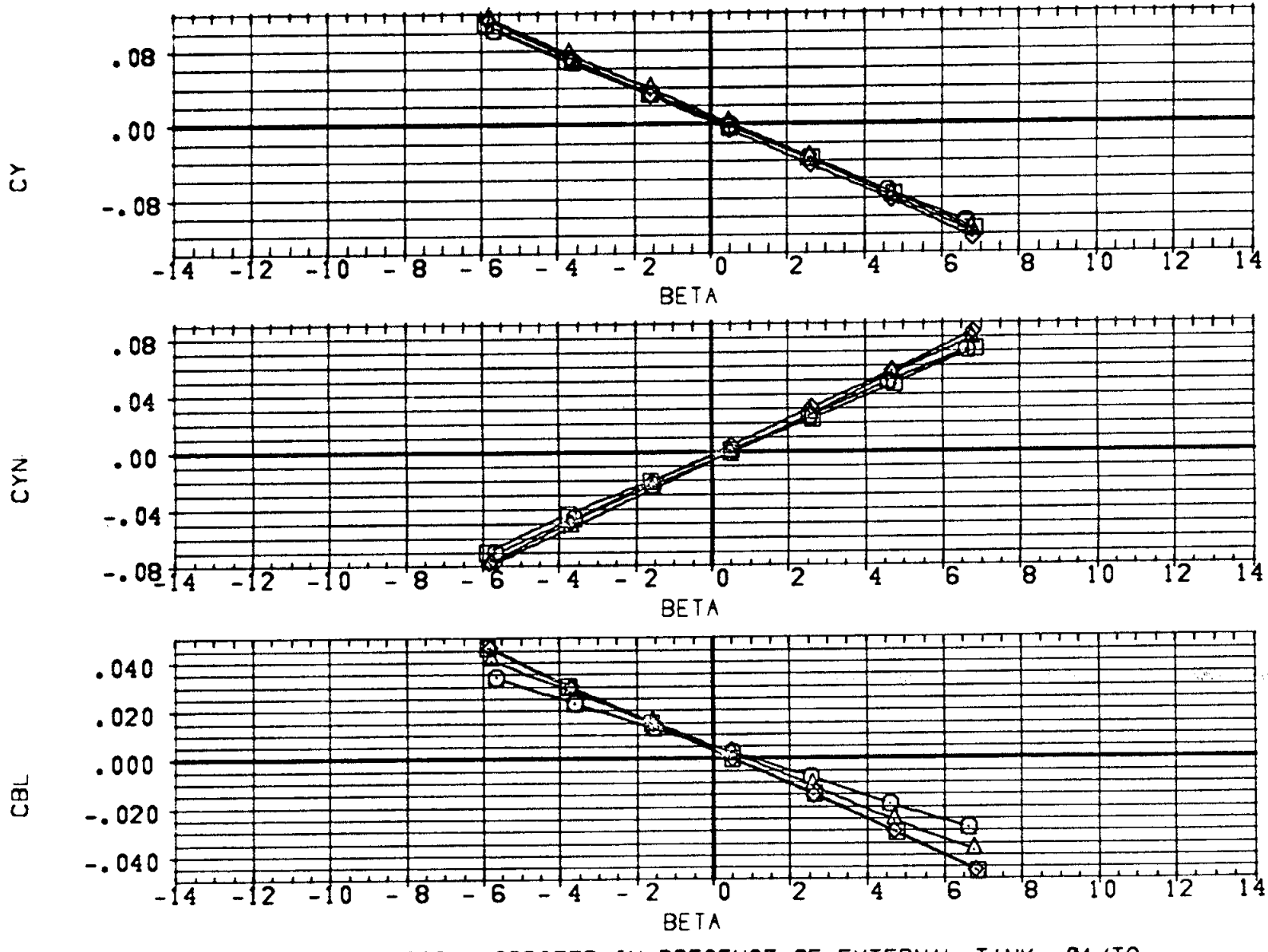
STABILITY CHARACTERISTICS - EFFECTS OF BOOSTER BUILDUP

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (A72007)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.601	ALPHA	.000	CONFIG	1.000
△	.903	RUDDER	.000	AILRON	.000
◇	1.000	ORBINC	.000	DELTAZ	.120
□	1.198	RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



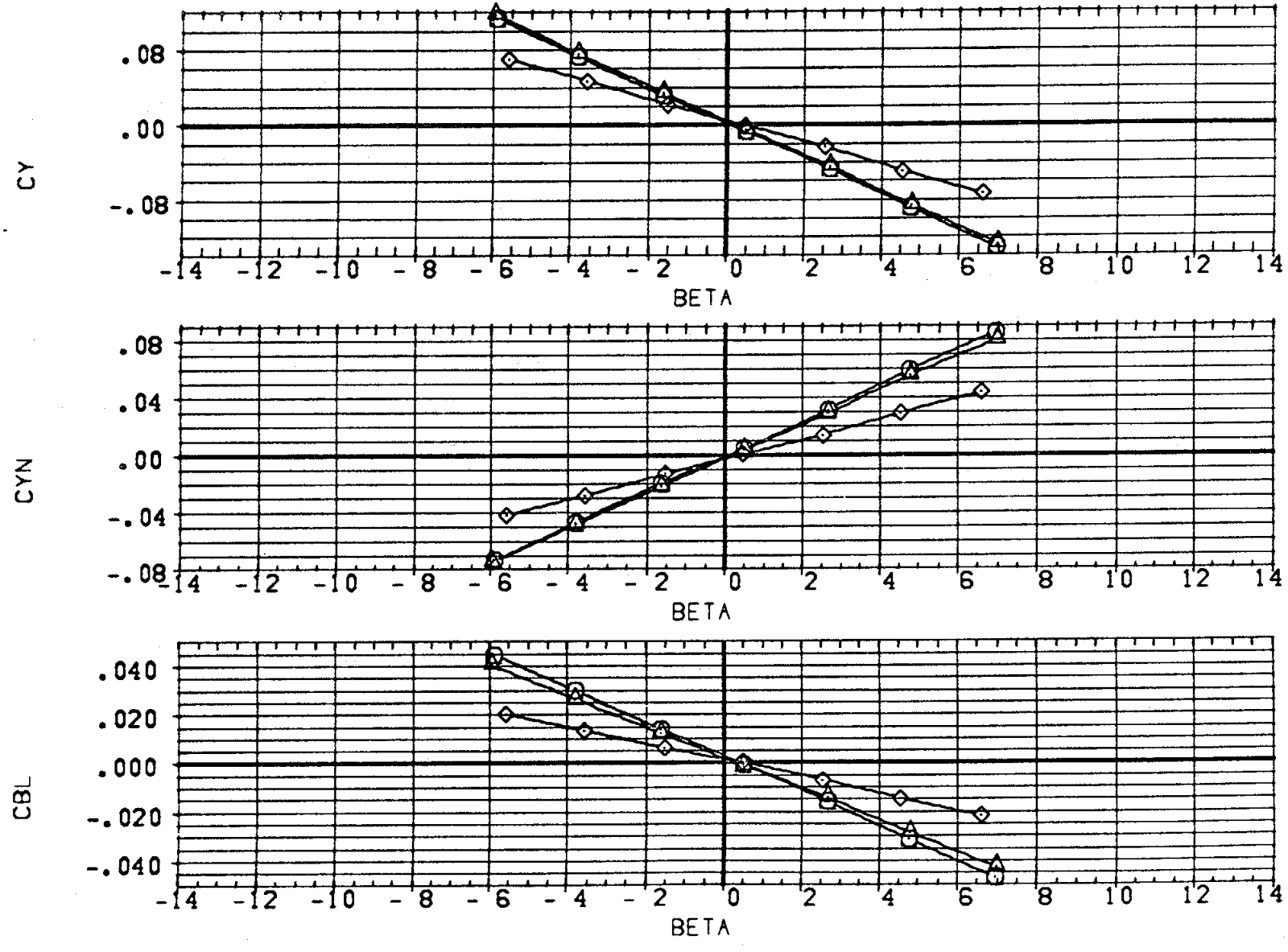
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (A72007)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.465	ALPHA	.000	CONFIG	1.000
△	1.954	RUDDER	.000	AILRON	.000
◇	4.960	ORBINC	.000	DELTAZ	.120
		RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

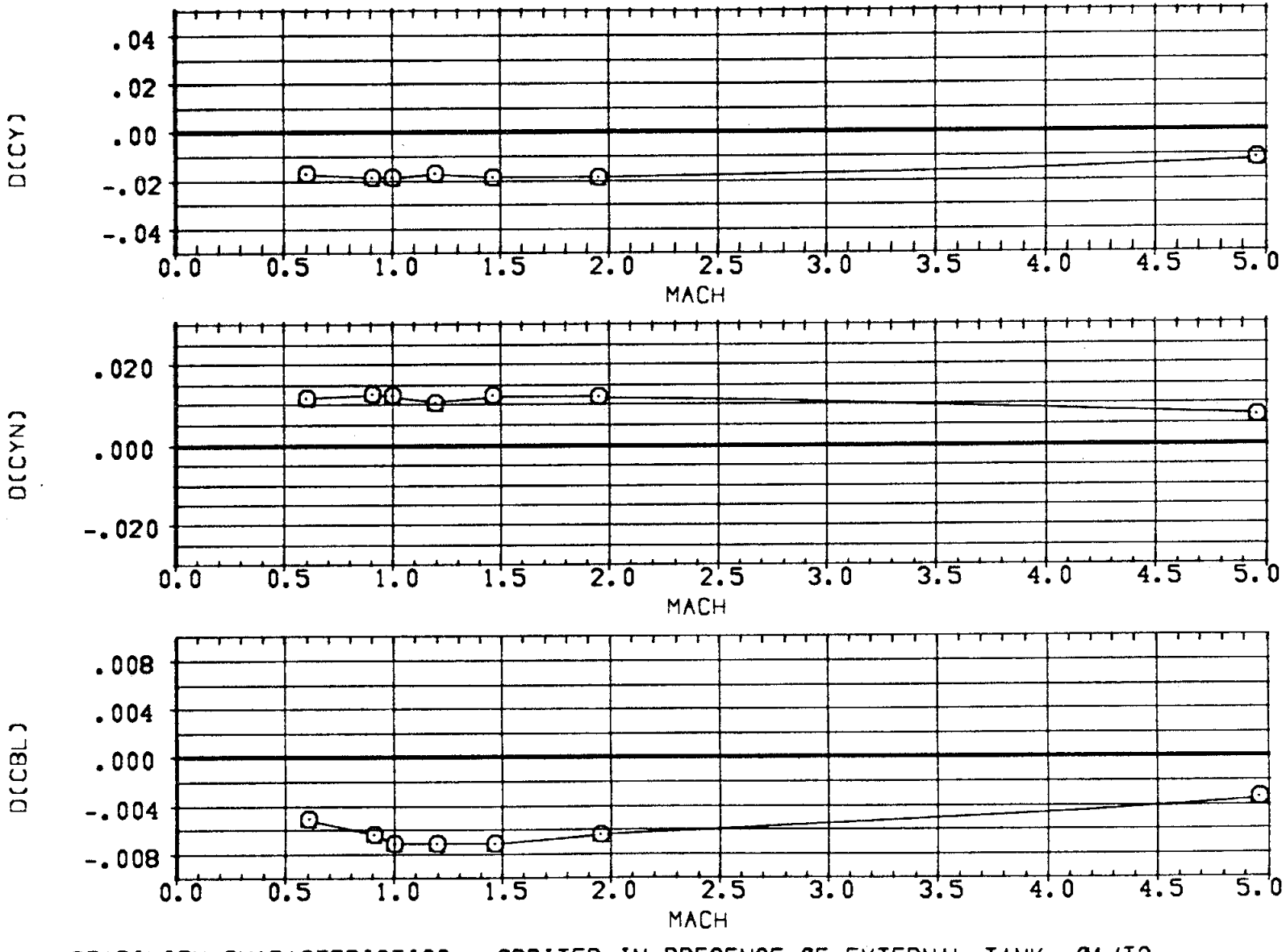


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (A72007)

PARAMETRIC VALUES			
ALPHA	.000	CONFIG	1.000
RUDDER	.000	AILRON	.000
ORBINC	.000	DELTAZ	.120
RUDFLR	10.000	ELEVTR	.000

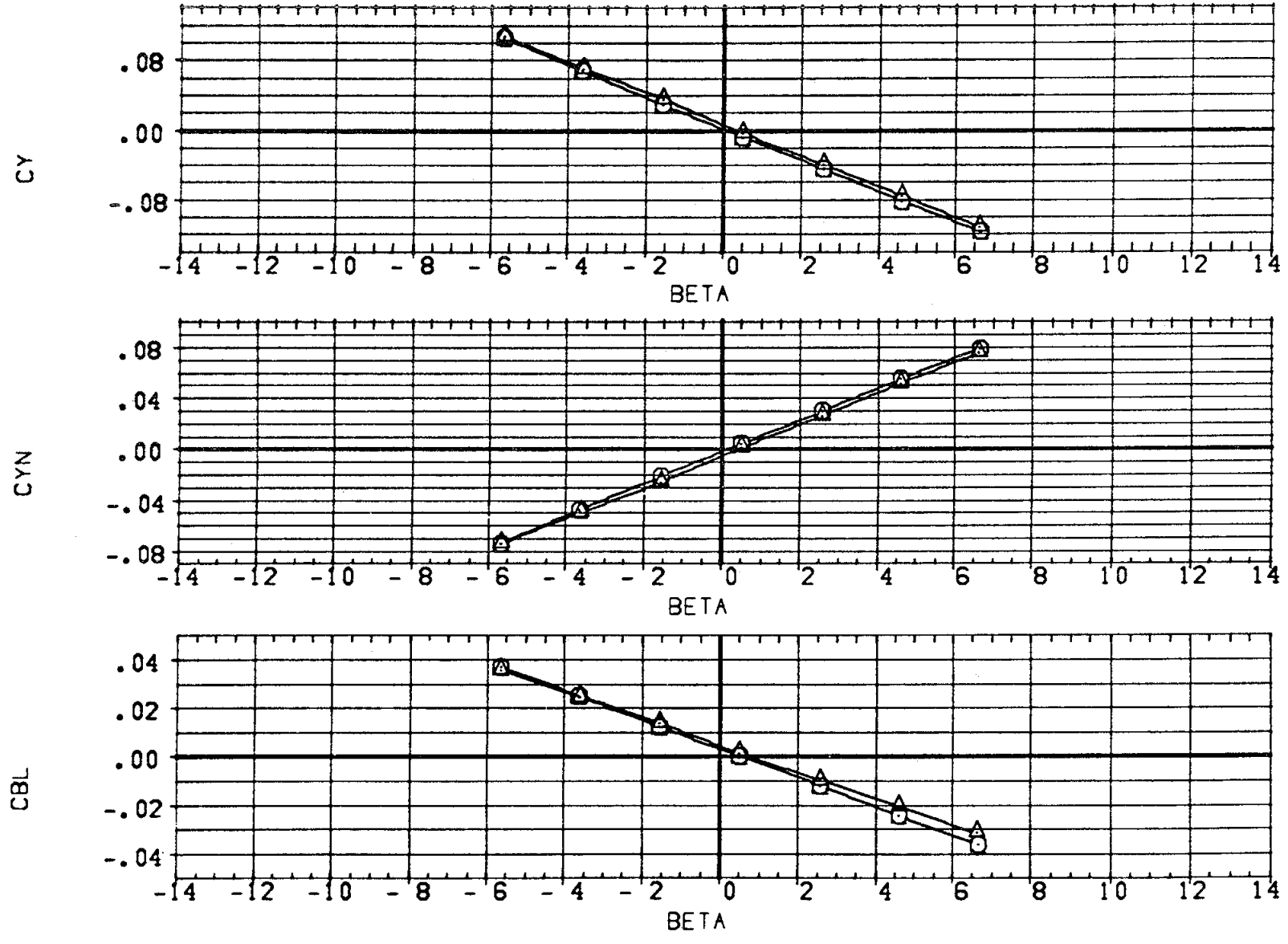
REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 01/T3

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2014)		MSFC 345 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	.000
(AP2028)		MSFC 345 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

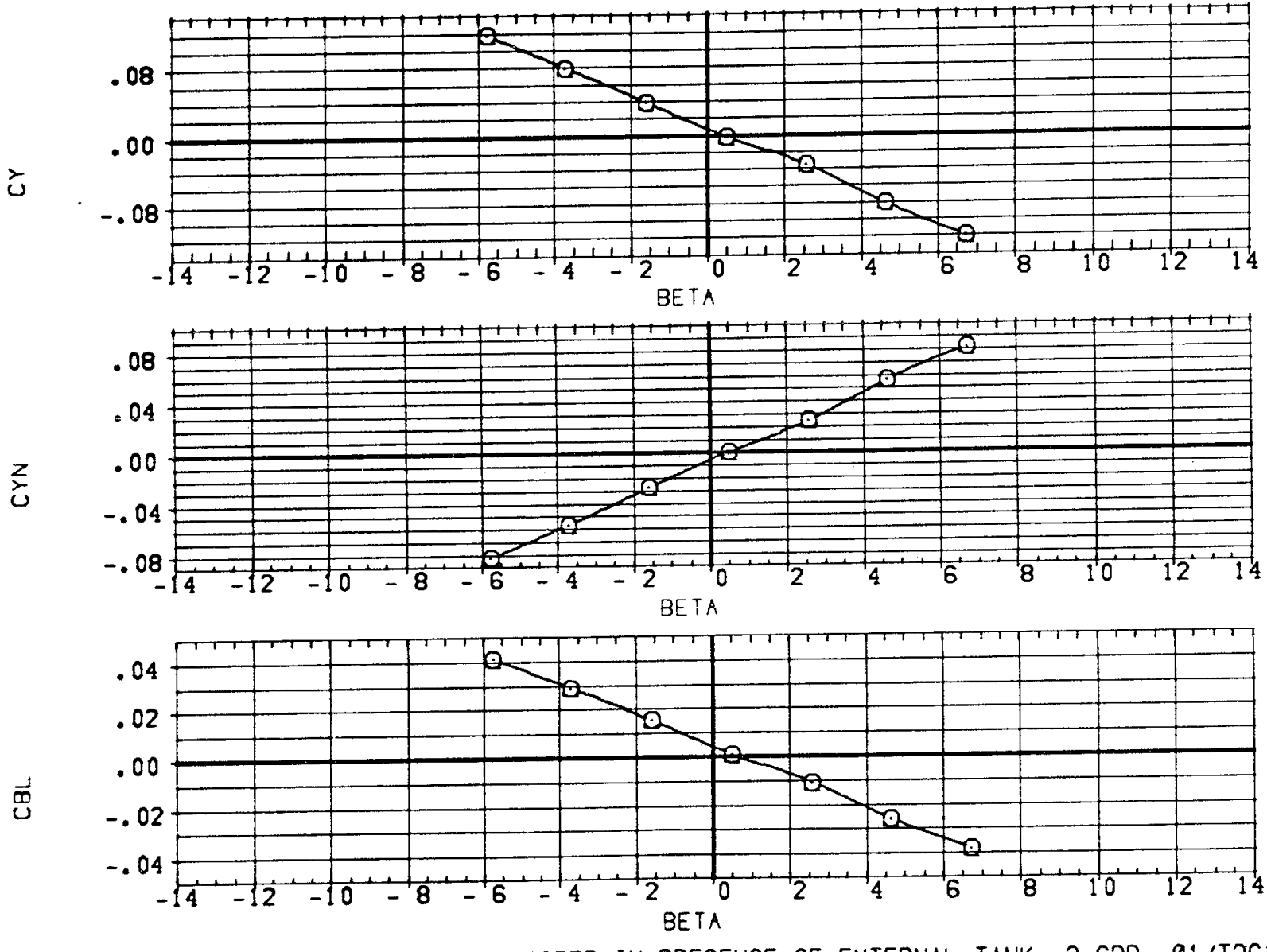


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72014)	MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	.000
(A72026)	DATA NOT AVAILABLE	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

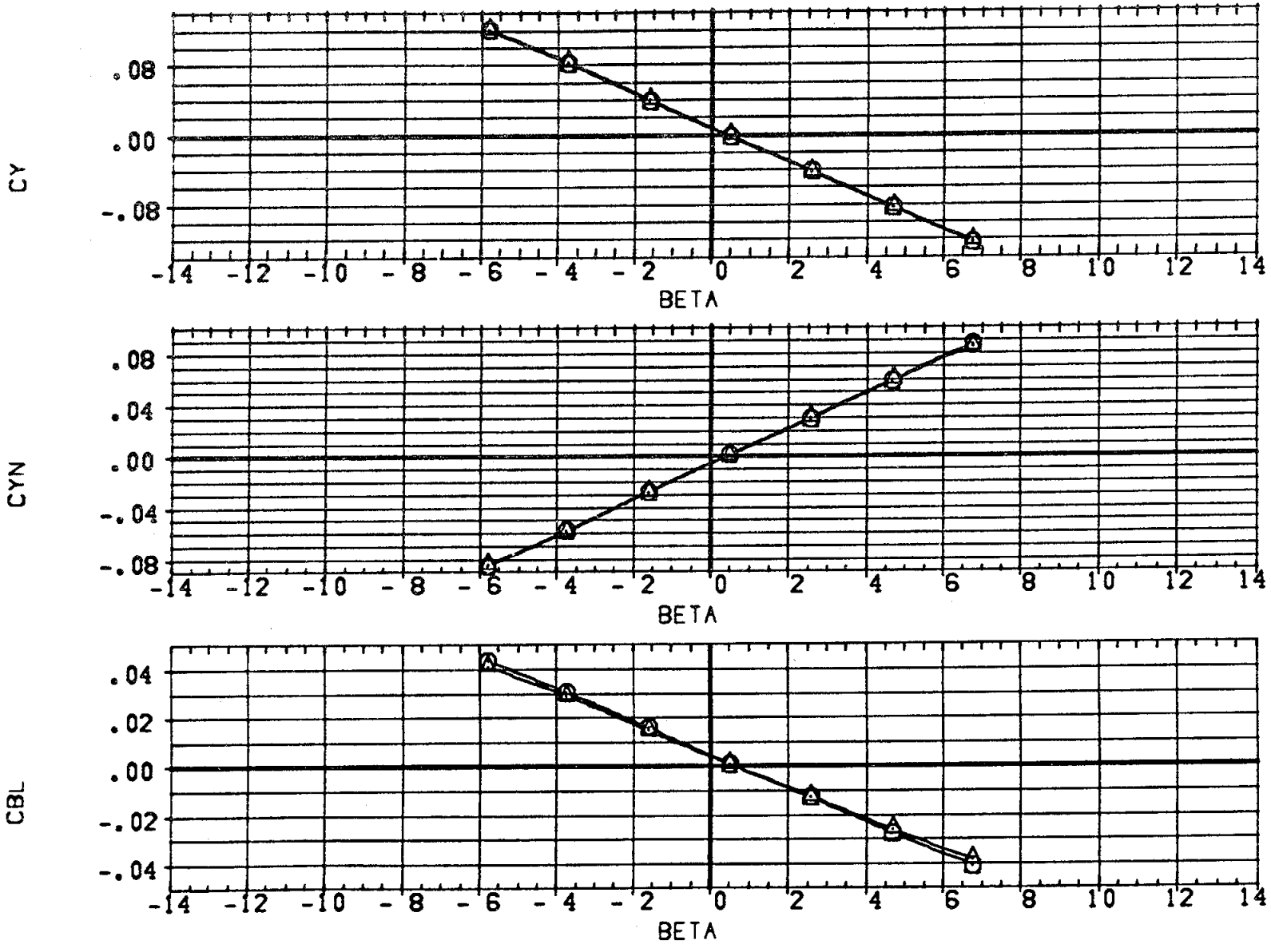


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(B)MACH = .80

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP8014)	MSFC S4S (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	.000
(AP8026)	MSFC S4S (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

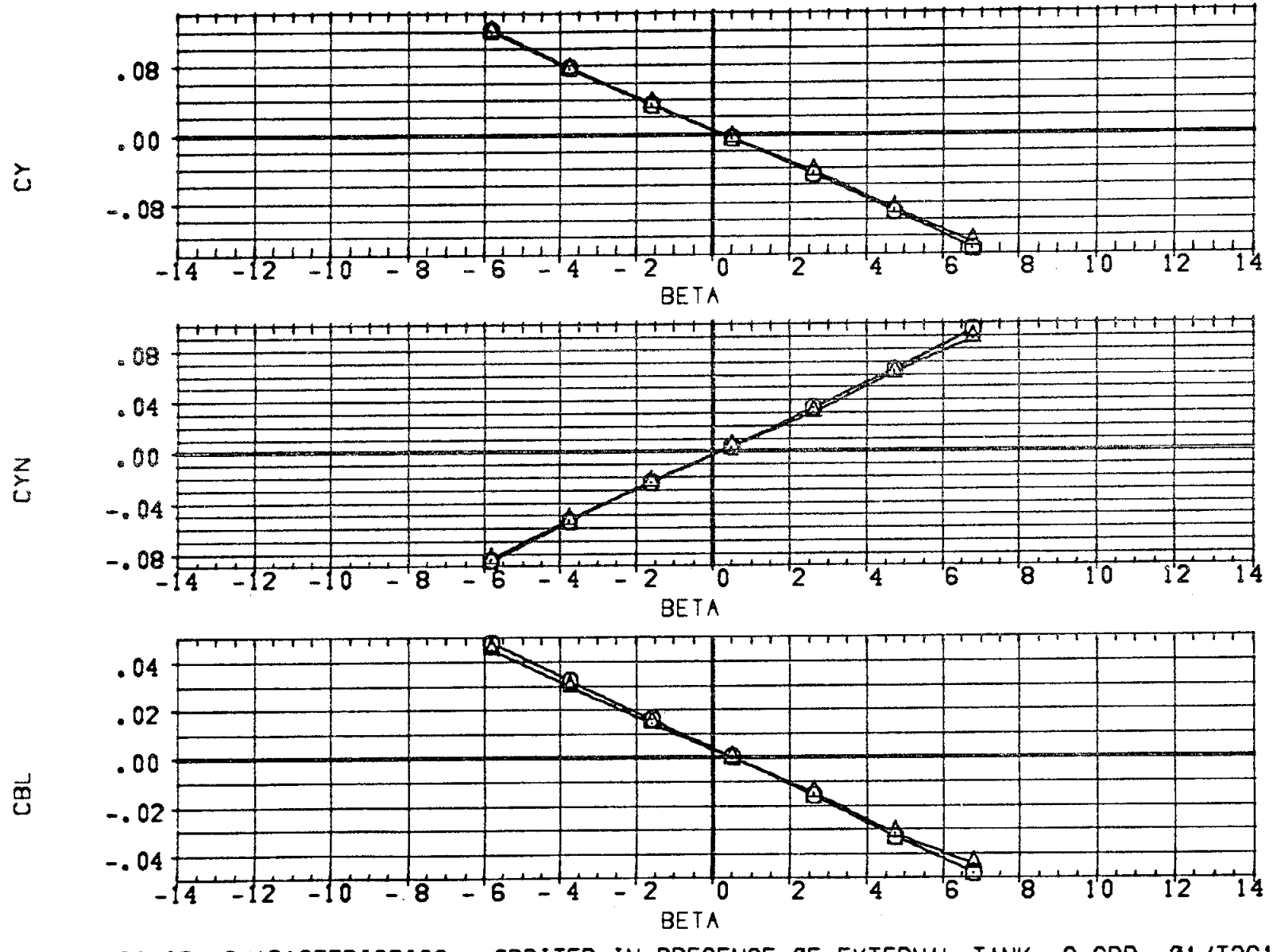


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(C)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72014)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72026)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



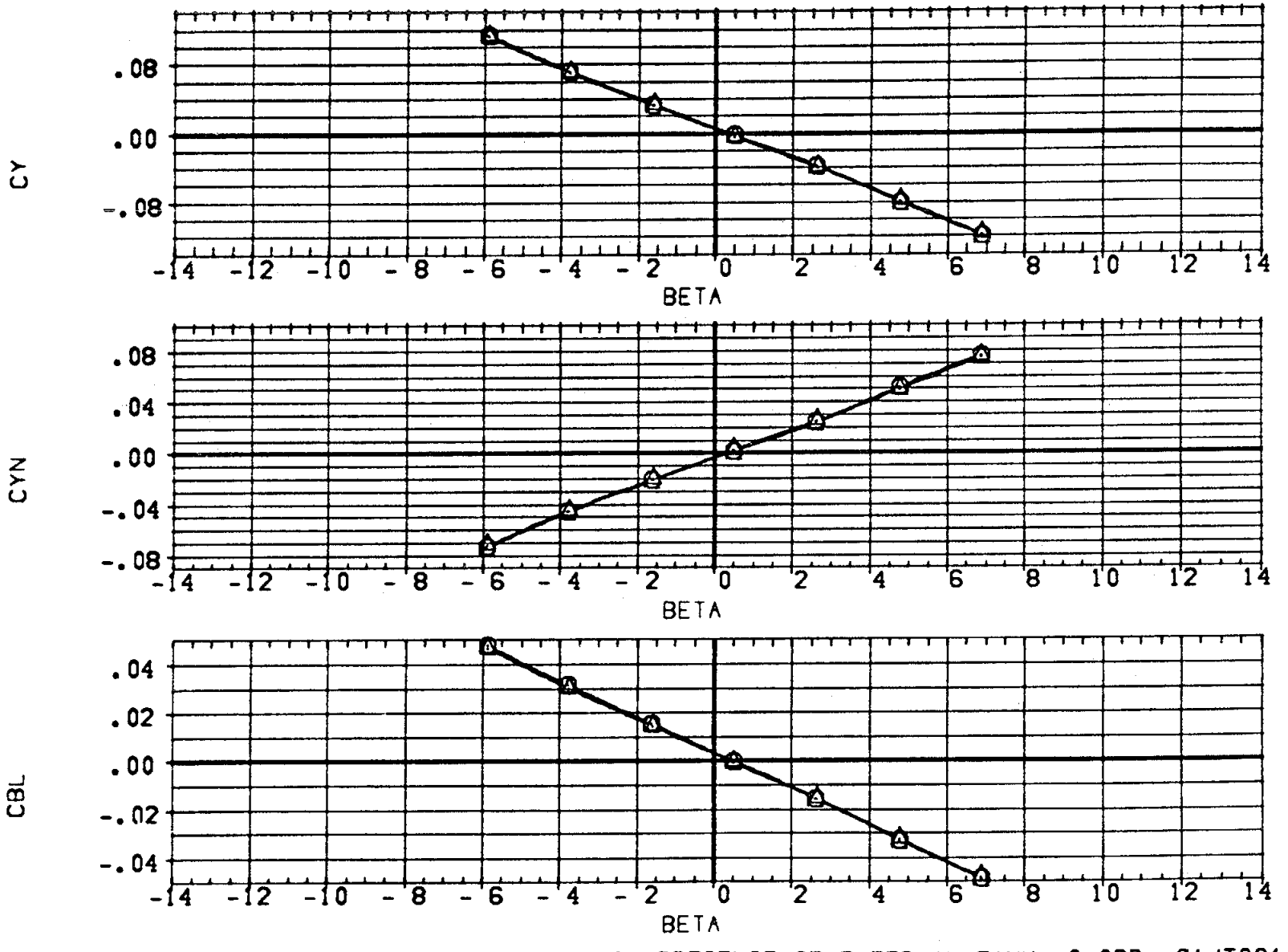
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(D)MACH = .99

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(APE014)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(APE026)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



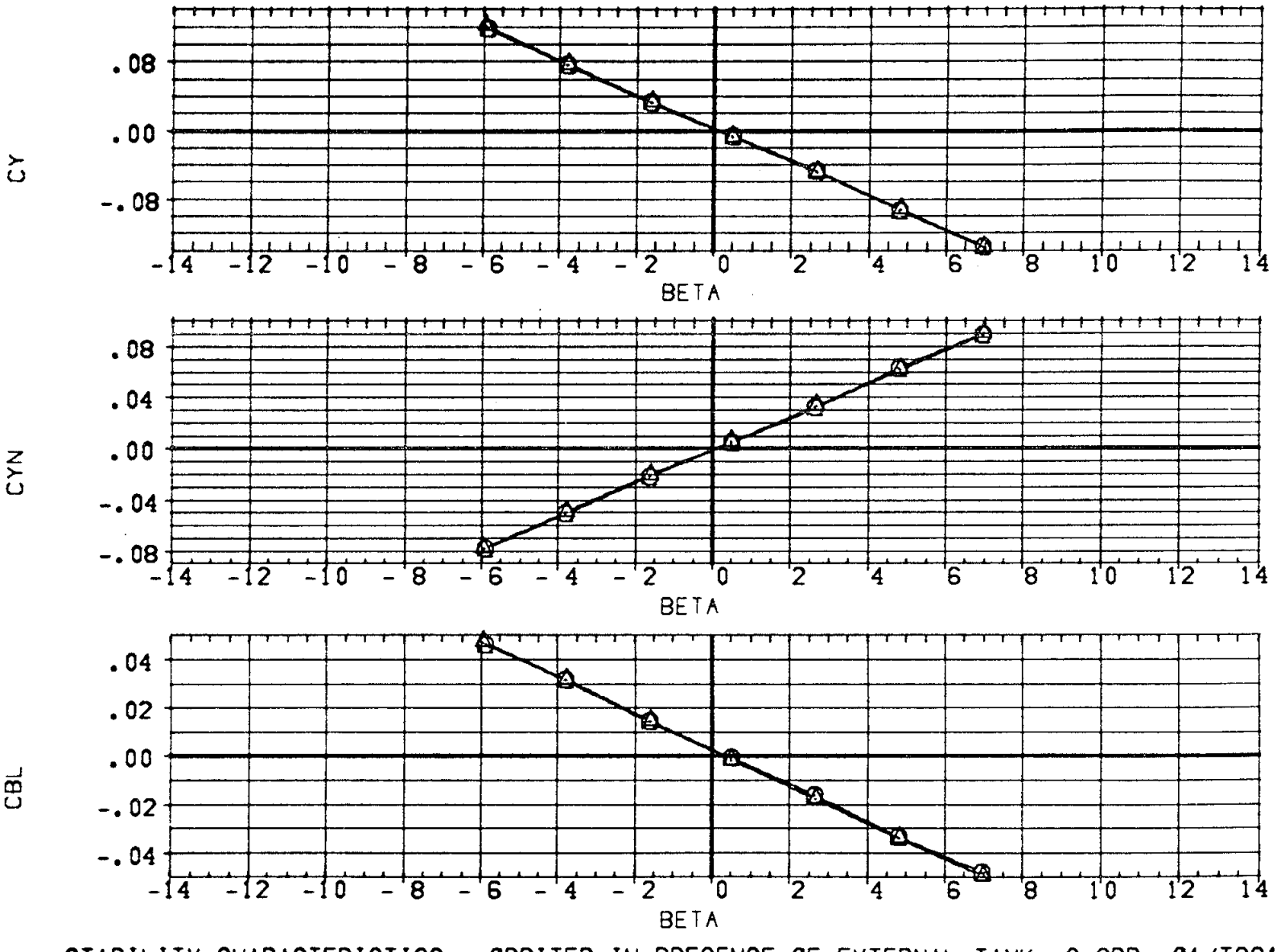
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72014)	○	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	.000
(A72026)	△	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



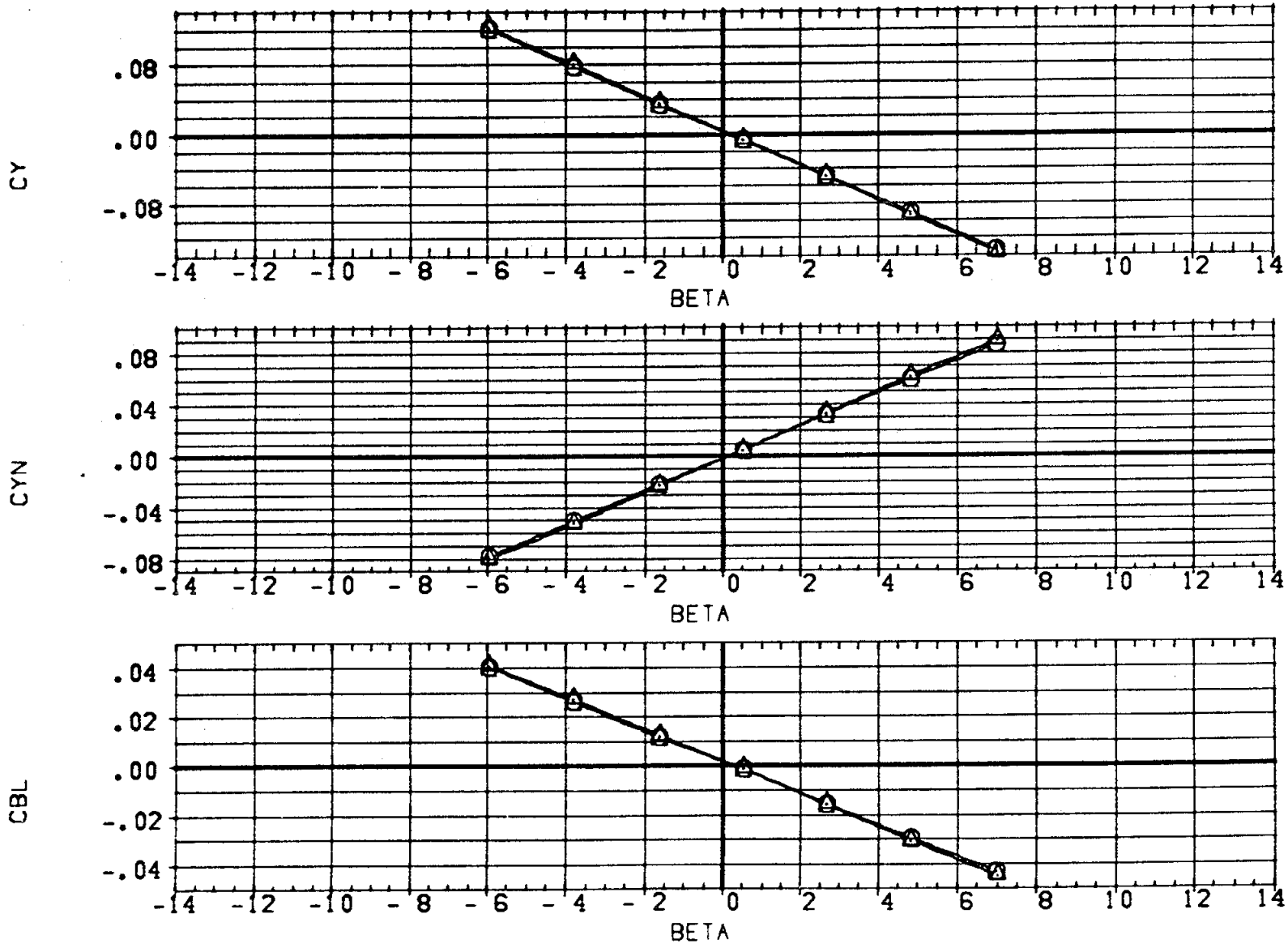
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72014)		HSFC 545 (IA1) MOD ATP LV=(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72026)		HSFC 545 (IA1) MOD ATP LV=(O1)/(T3)(S1)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

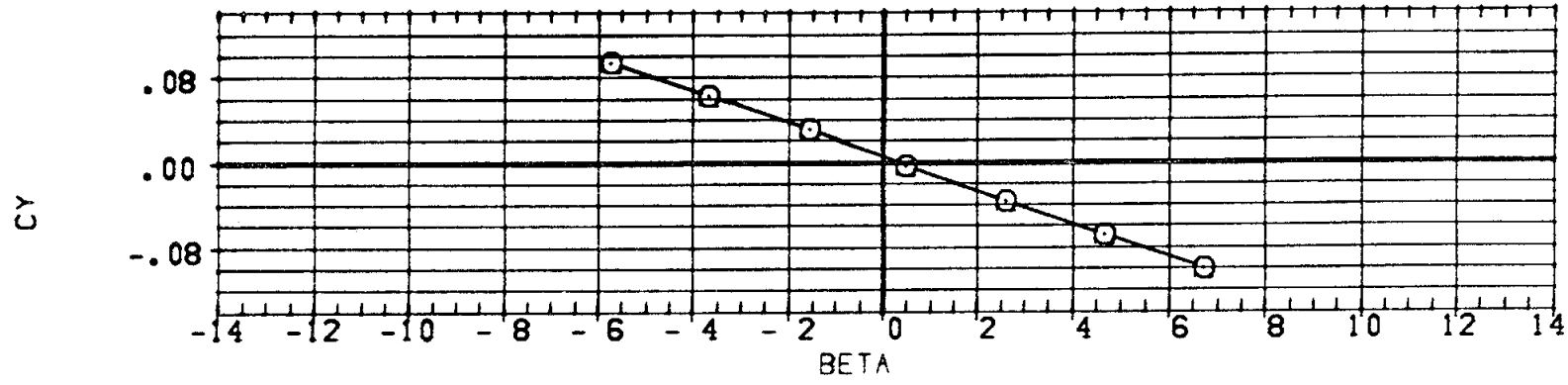


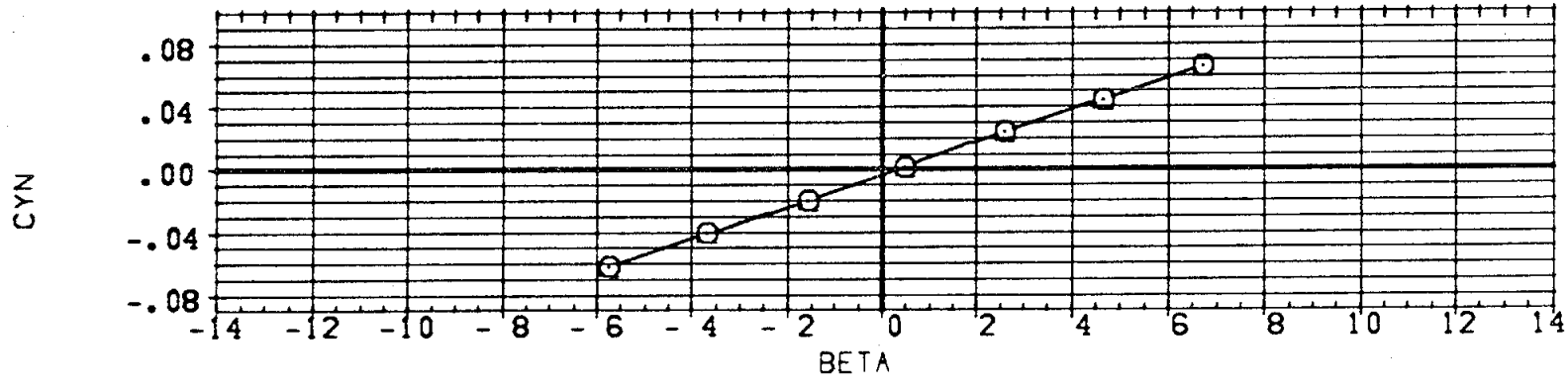
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

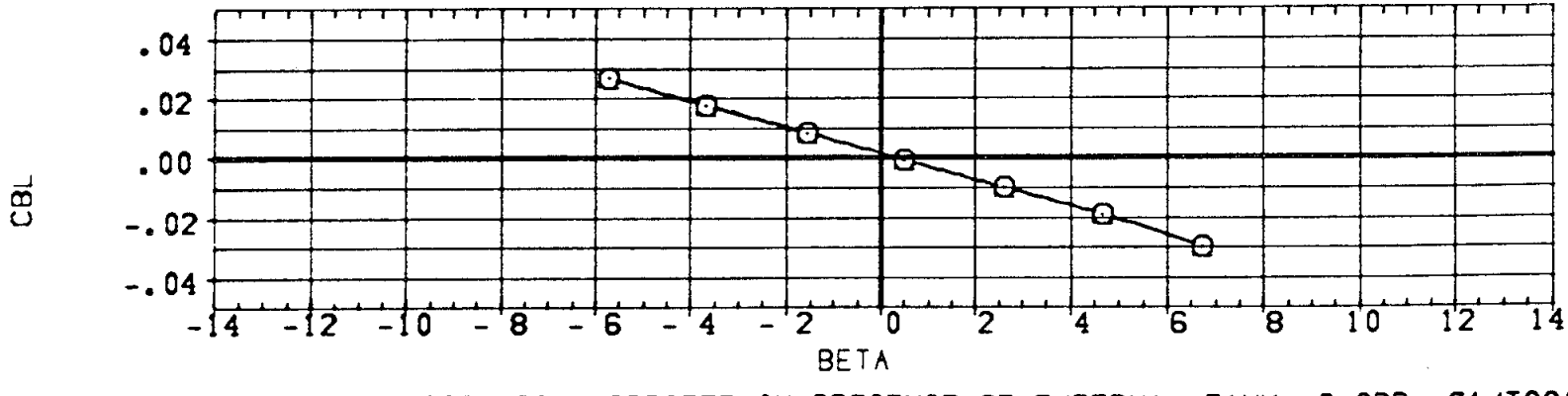
(G)MACH = 1.96

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72014)	⍜	MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	.000
(A72028)	⧖	DATA NOT AVAILABLE	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







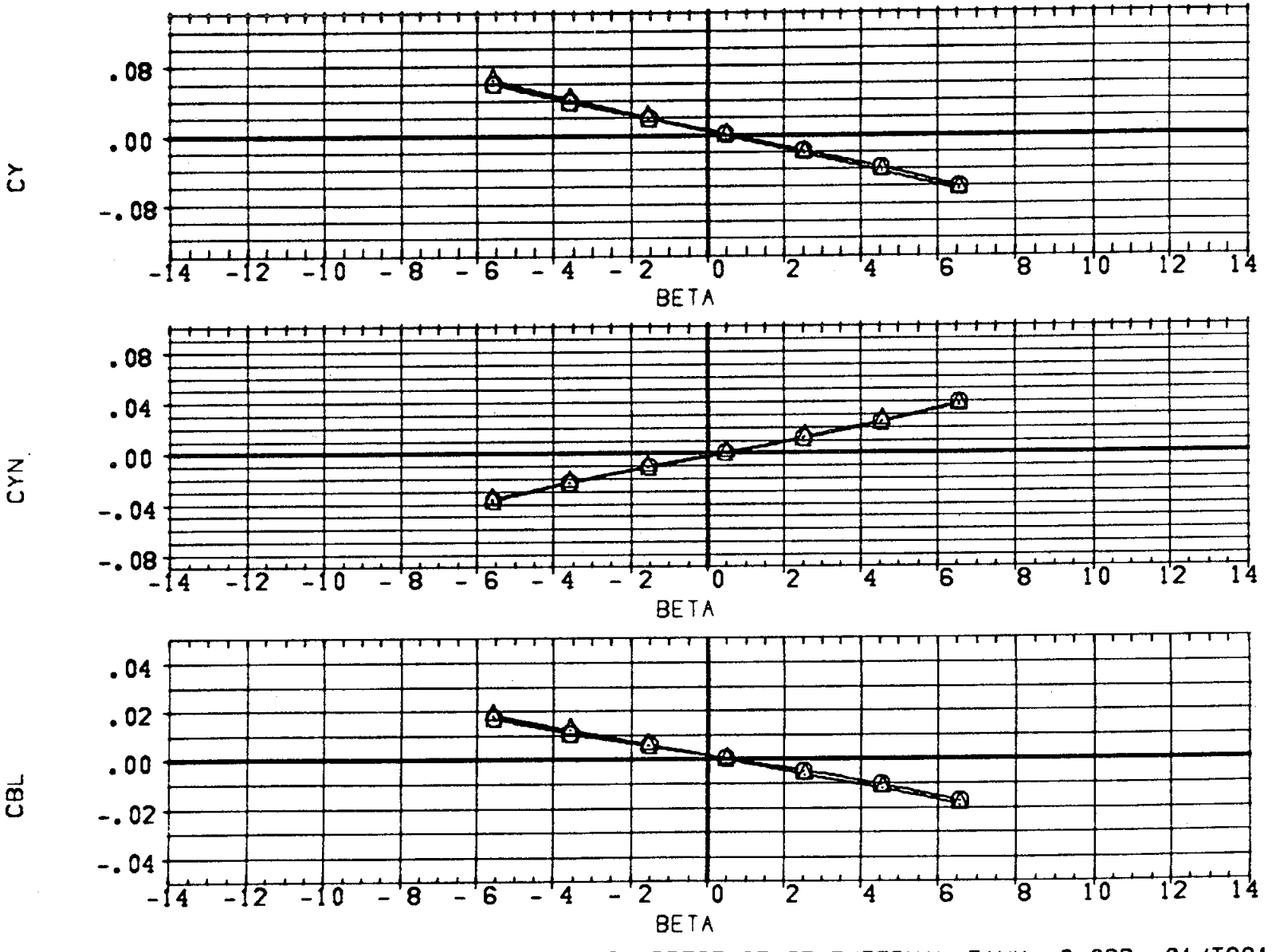
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72014)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	.000
(A72028)		MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



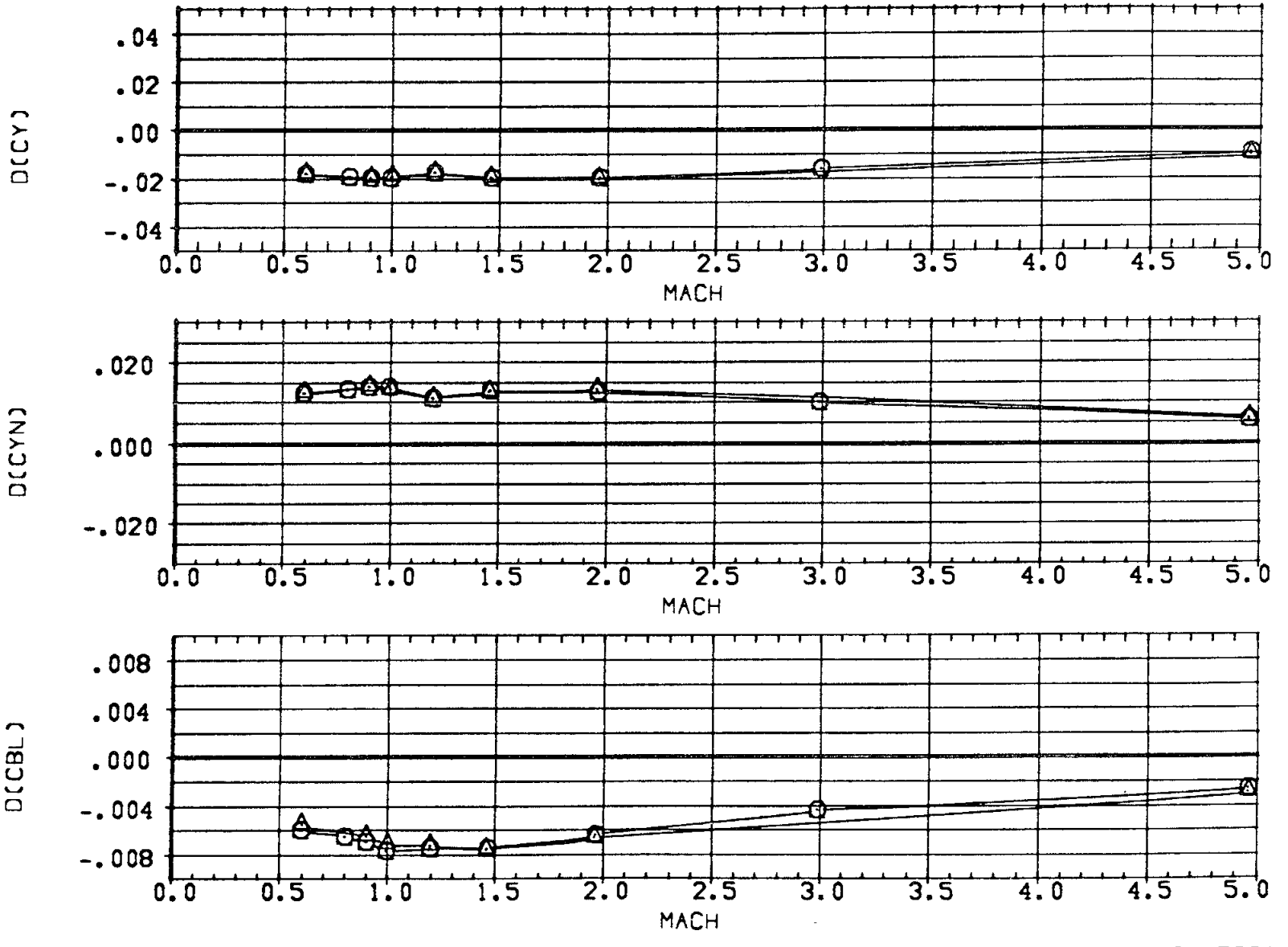
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

CIDMACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2014)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(AY2026)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



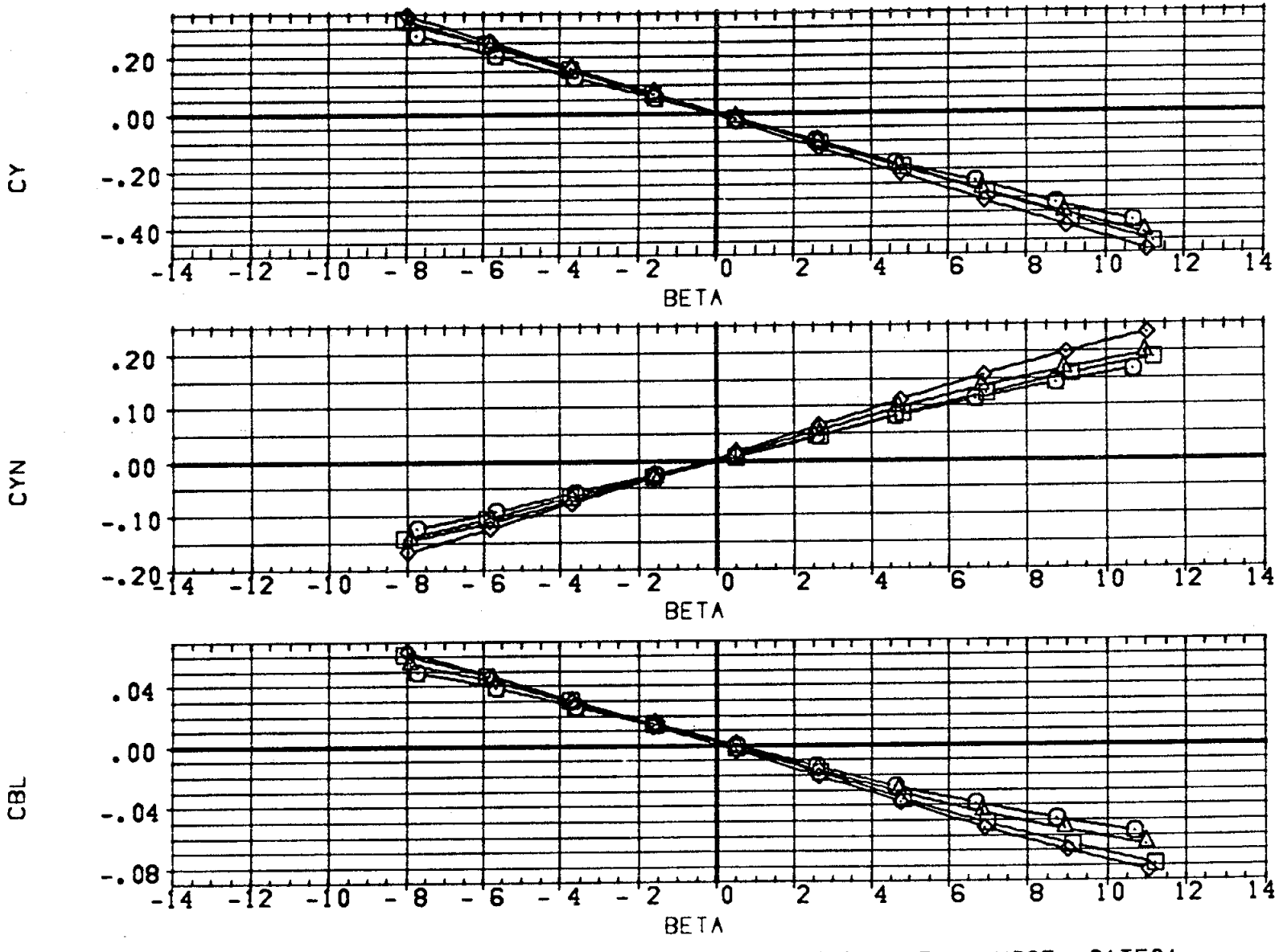
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF EXTERNAL TANK, 2 SRB, 01/T3S1

MSFC 545 (IA1) MOD ATP LV-(01)(T5)(S1) (A72302)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.601	ALPHA	.000	CONFIG	5.000
△	.901	RUDDER	.000	AILRON	.000
◇	.994	ORBINC	.000	DELTAZ	.120
□	1.195	RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



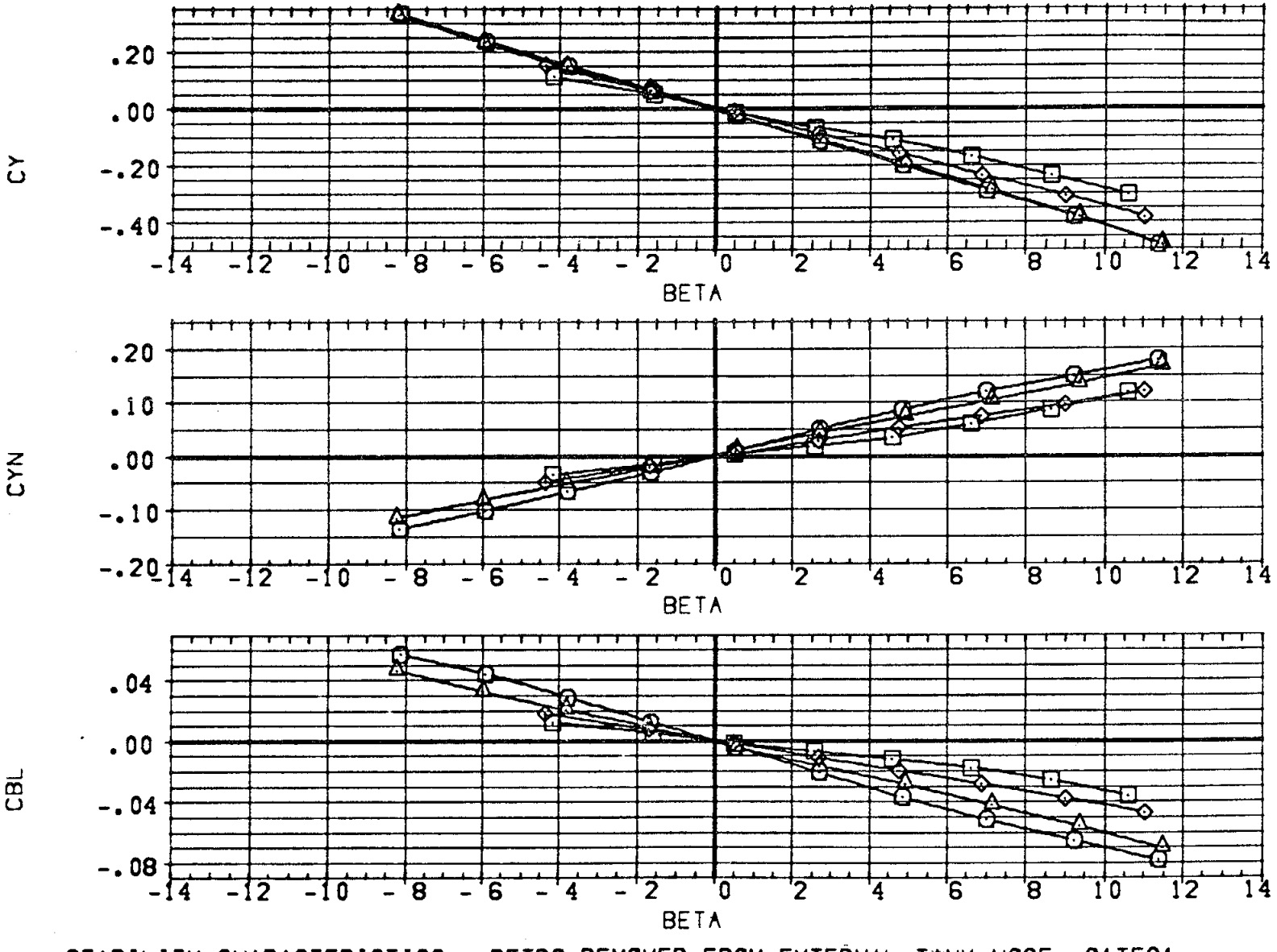
STABILITY CHARACTERISTICS - RETRO REMOVED FROM EXTERNAL TANK NOSE, 01T5S1

MSFC 545 (1A1) MOD ATP LV-(01)(T5)(S1) (A72302)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.460	ALPHA	.000	CONFIG	5.000
△	1.977	RUDDER	.000	AILRON	.000
◇	2.990	ORBINC	.000	DELTAZ	.120
□	4.960	RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - RETRO REMOVED FROM EXTERNAL TANK NOSE, 01T5S1

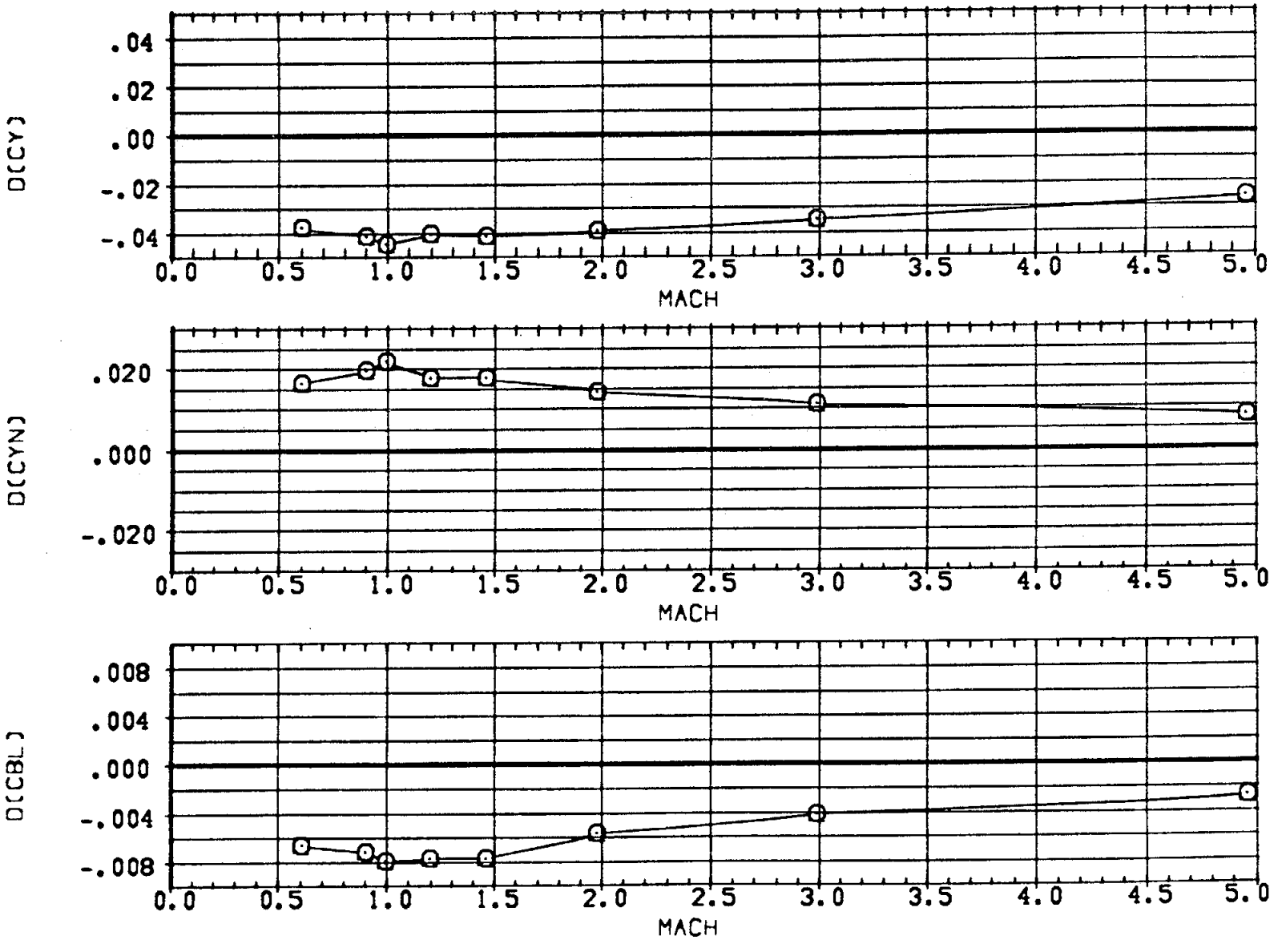
MSFC 545 (IA1) MOD ATP LV-(01)(T5)(S1) (A72302)

PARAMETRIC VALUES

ALPHA	.000	CONFIG	5.000
RUDDER	.000	AILRON	.000
ORBINC	.000	DELTAZ	.120
RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

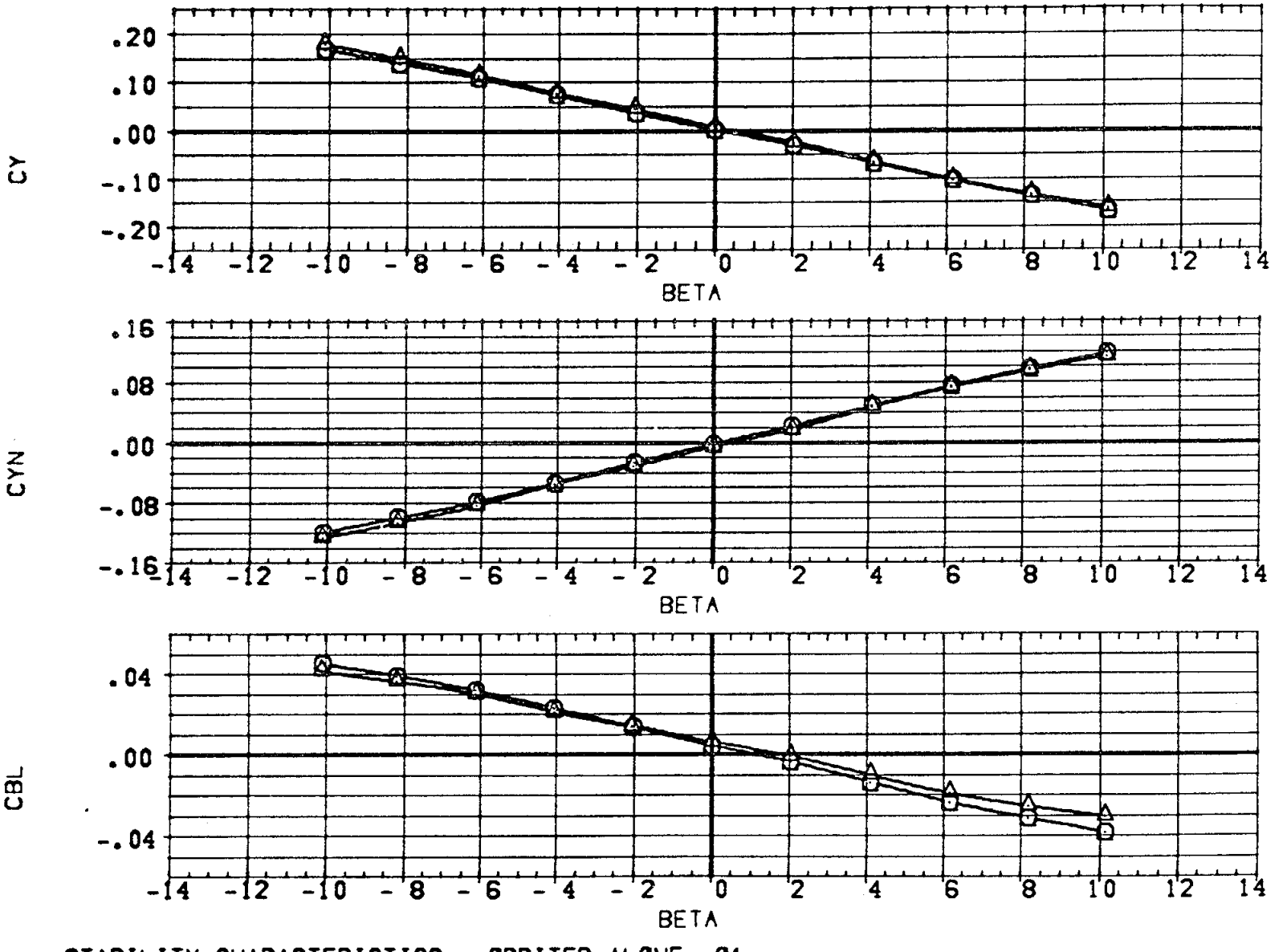
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - RETRO REMOVED FROM EXTERNAL TANK NOSE, 01T5S1

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDFLR	ELEVTR	AILRON
(A72504)	○	HSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	10.000	.000	.000
(A72505)	△	HSFC 545 (IA1) NAR ATP BL ORBITER-(01)	-5.000	10.000	.000	.000

REFERENCE INFORMATION		
SREF	3228.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

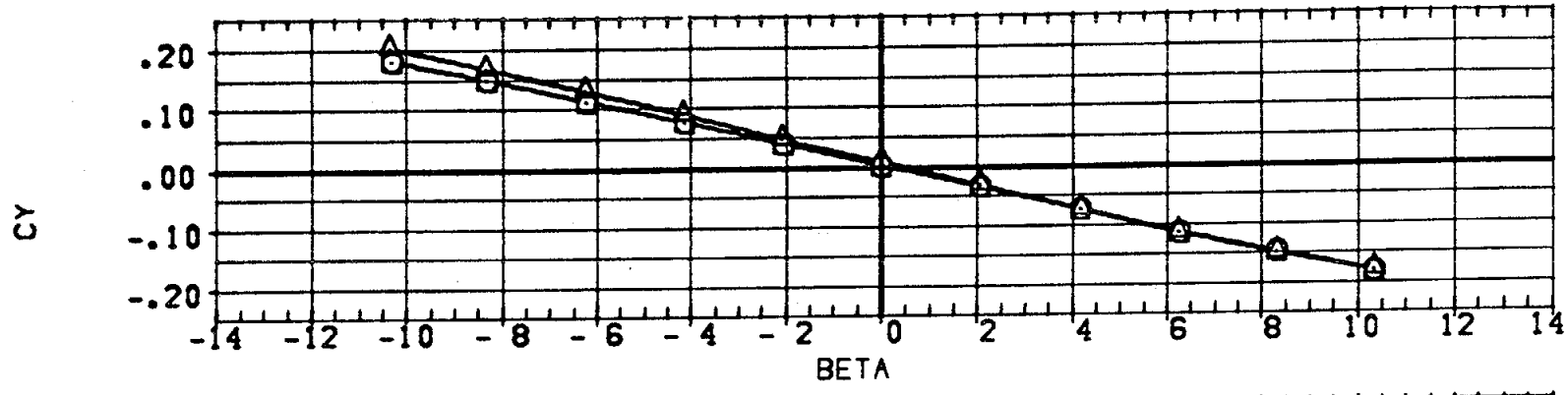


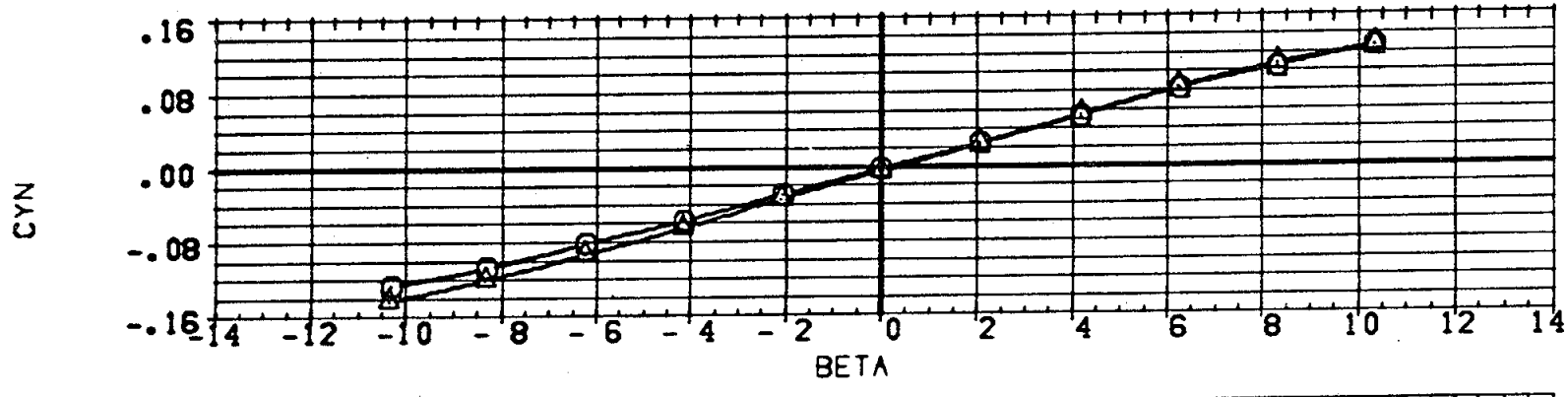
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

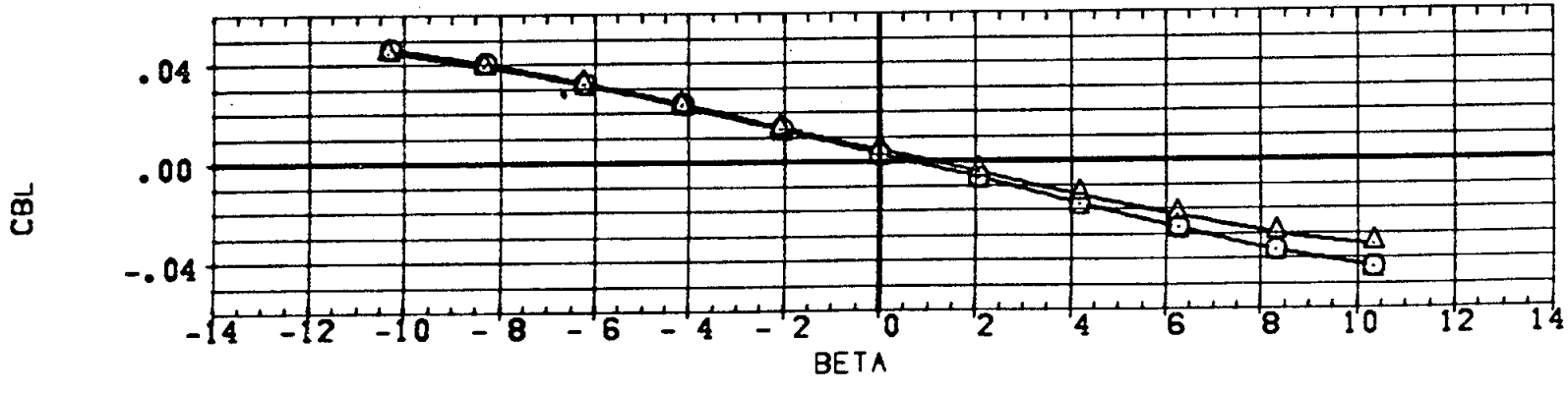
(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDFLR	ELEVTR	AILRON
(AY2504)	HSFC 545 (1A1) NAR ATP BL ORBITER-(01)	.000	10.000	.000	.000
(AY2505)	HSFC 545 (1A1) NAR ATP BL ORBITER-(01)	-5.000	10.000	.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





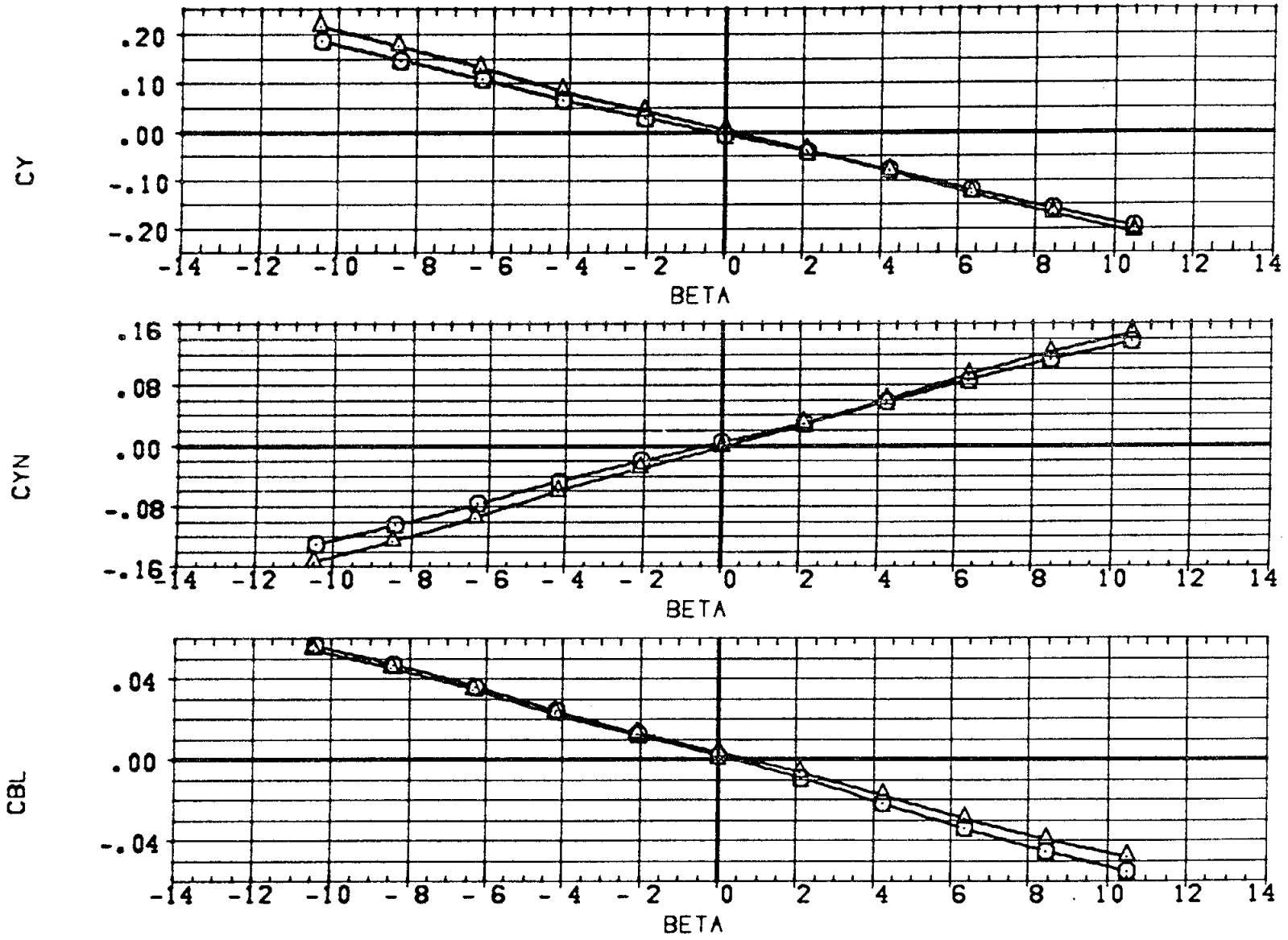


STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDFLR	ELEVTR	AILRON
(A72S04)		MSFC S4S (1A1) NAR ATP BL ORBITER-(01)	.000	10.000	.000	.000
(A72S05)		MSFC S4S (1A1) NAR ATP BL ORBITER-(01)	-5.000	10.000	.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



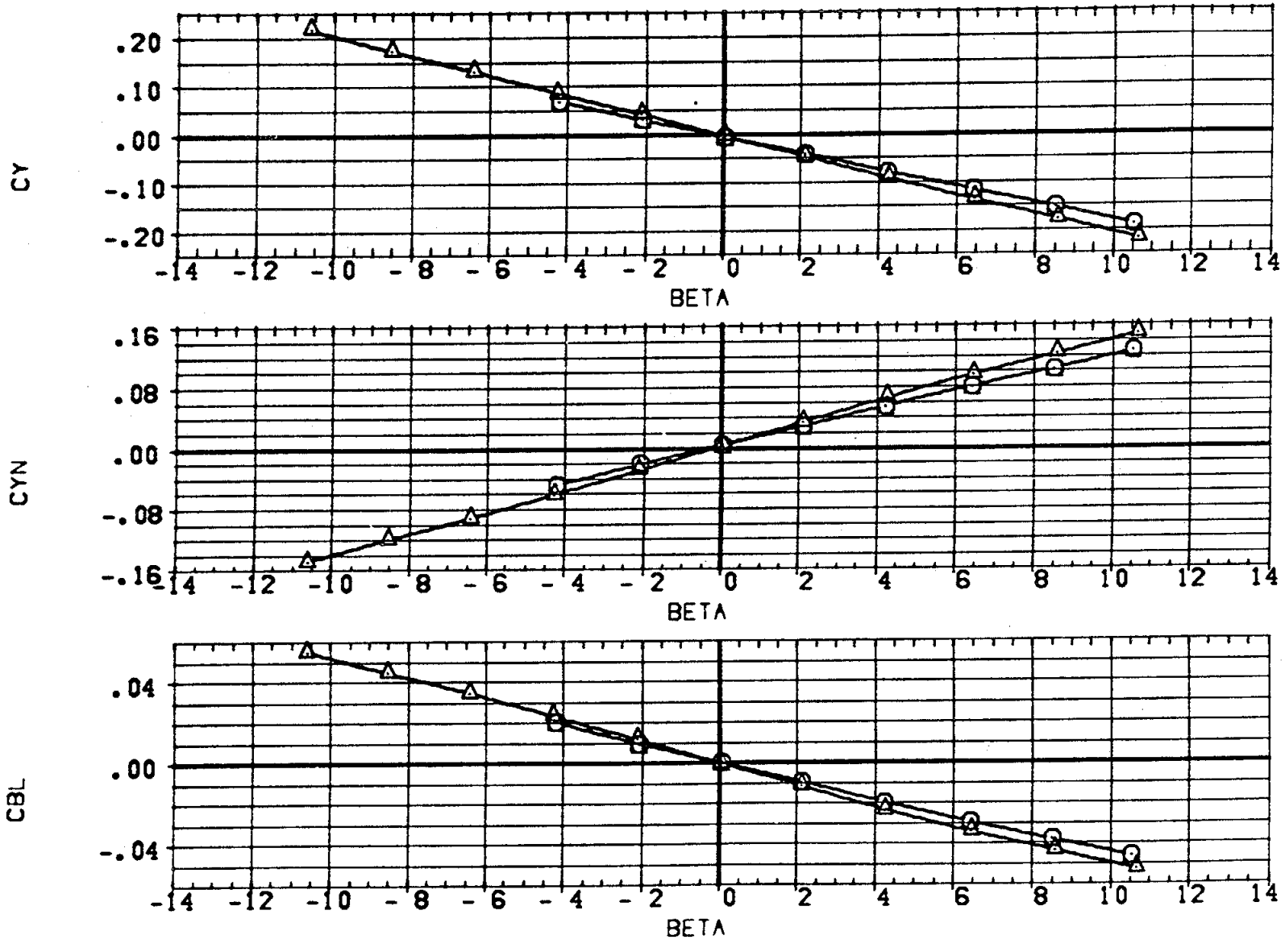
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(C)MACH = 1.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDFLR	ELEVTR	AILRON
(AP2504)	HSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	10.000	.000	.000
(AP2505)	HSFC 545 (IA1) NAR ATP BL ORBITER-(01)	-5.000	10.000	.000	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

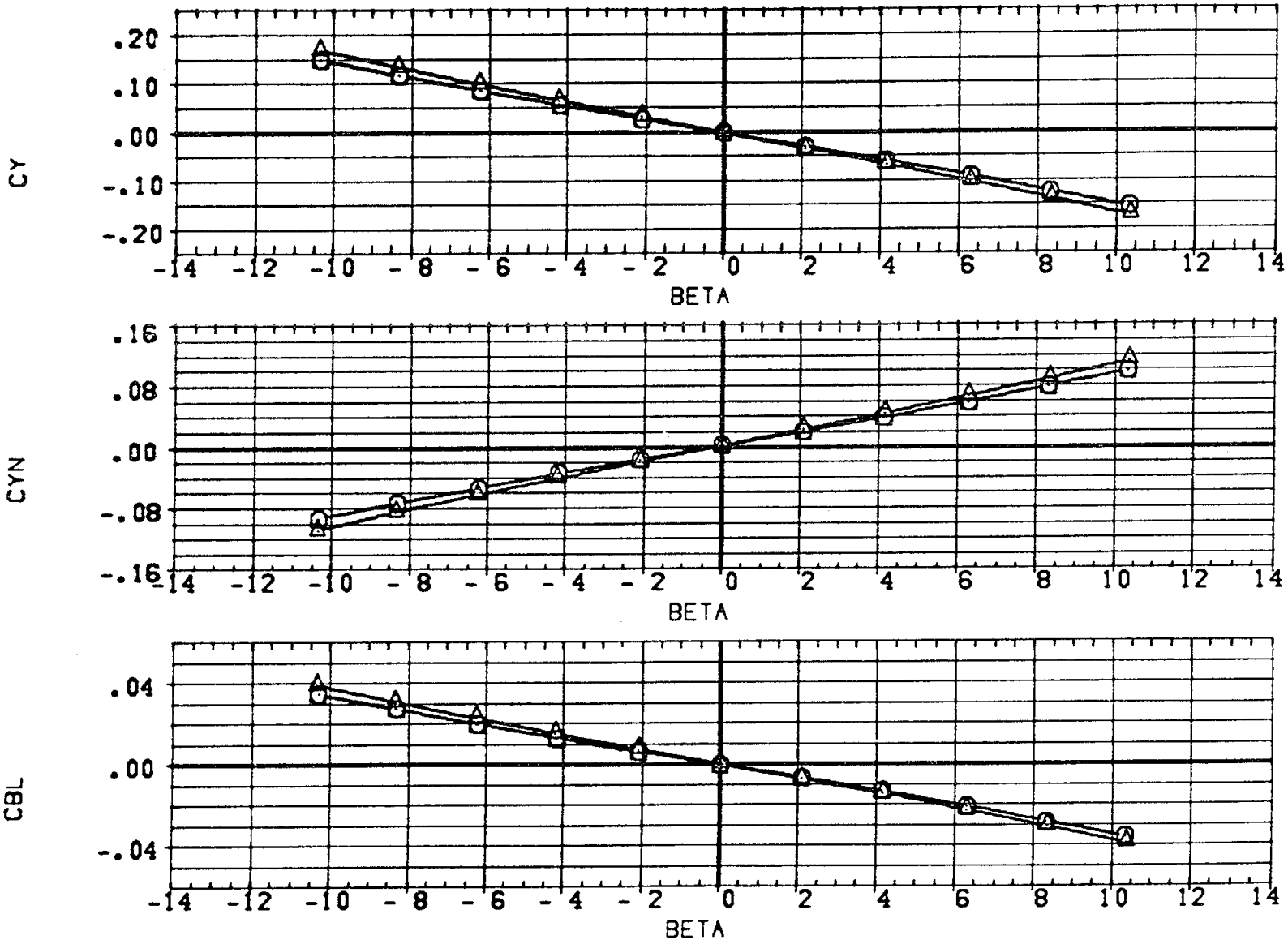


STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(D)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDFLR	ELEVTR	AILRON
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	10.000	.000	.000
(A72505)	△	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	-5.000	10.000	.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

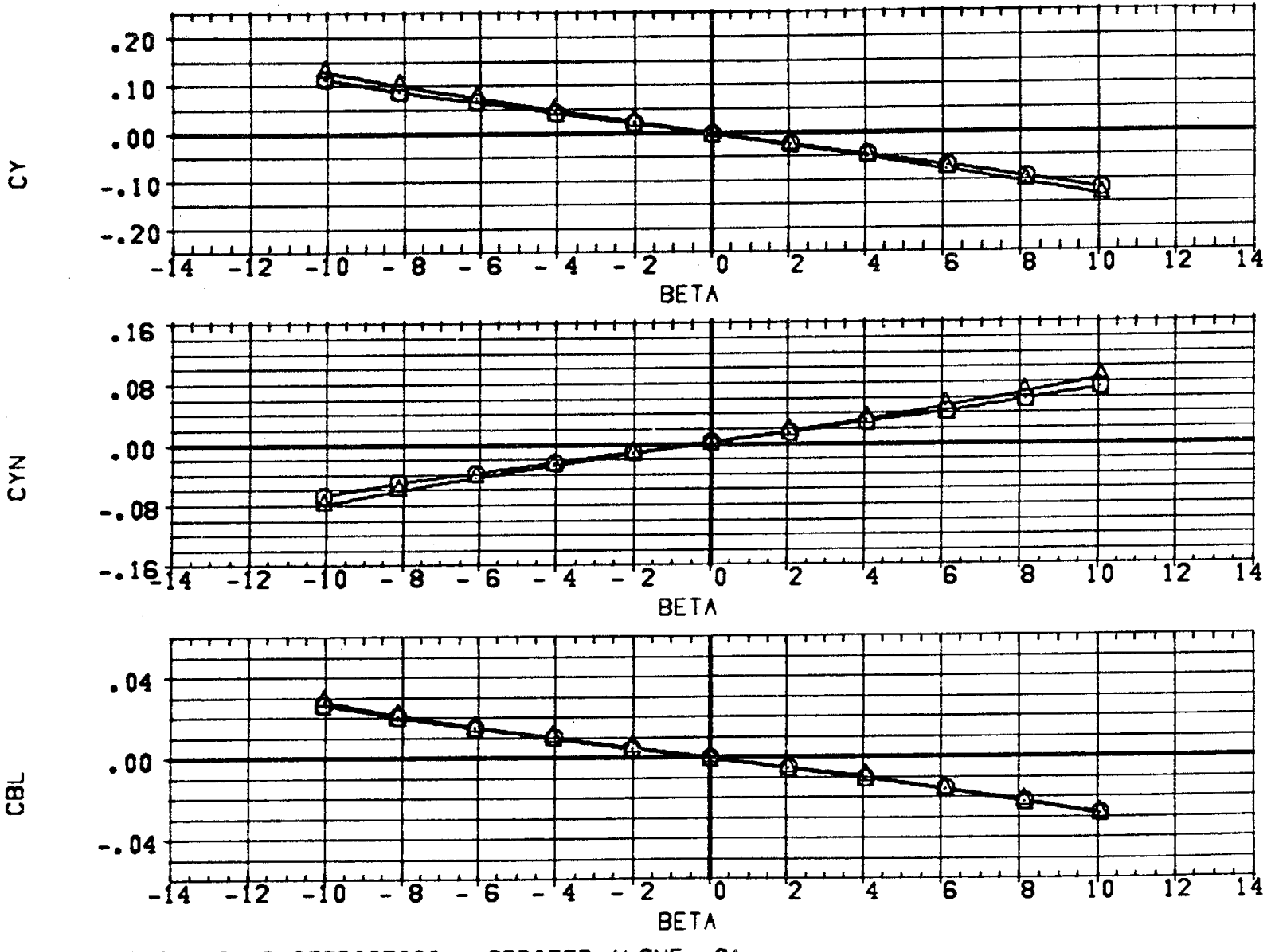


STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(E)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDFLR	ELEVTR	AILRON
(A72S04)		MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	.000	10.000	.000	.000
(A72S05)		MSFC 545 (IA1) NAR ATP BL ORBITER-(01)	-5.000	10.000	.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

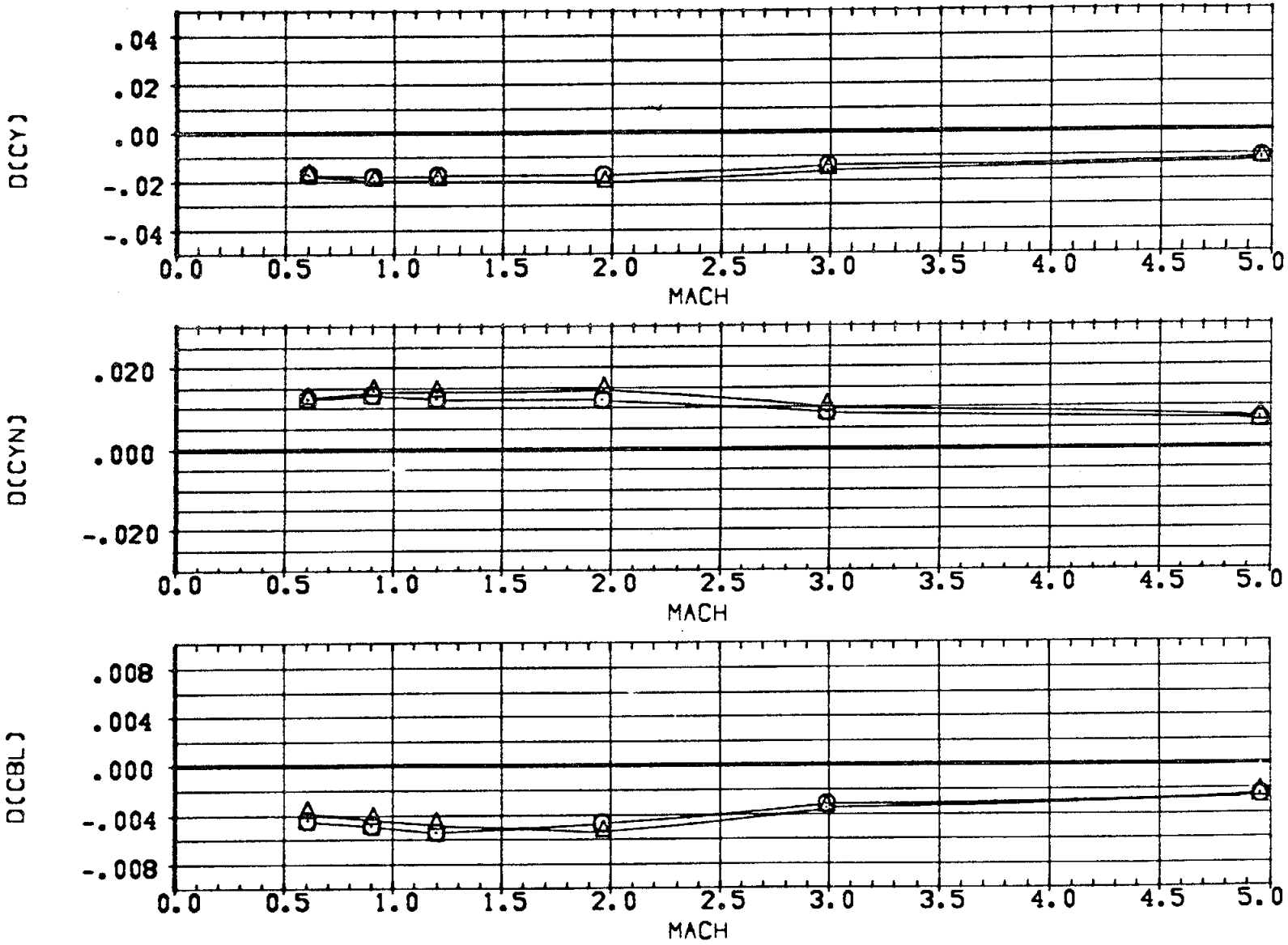


STABILITY CHARACTERISTICS - ORBITER ALONE, 01

(F)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDFLR	ELEVTR	AILRON
(AP2804)	WSPC 949 (IA1) NAR ATP BL ORBITER-(01)	.000	10.000	.000	.000
(AP2805)	WSPC 949 (IA1) NAR ATP BL ORBITER-(01)	-5.000	10.000	.000	.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



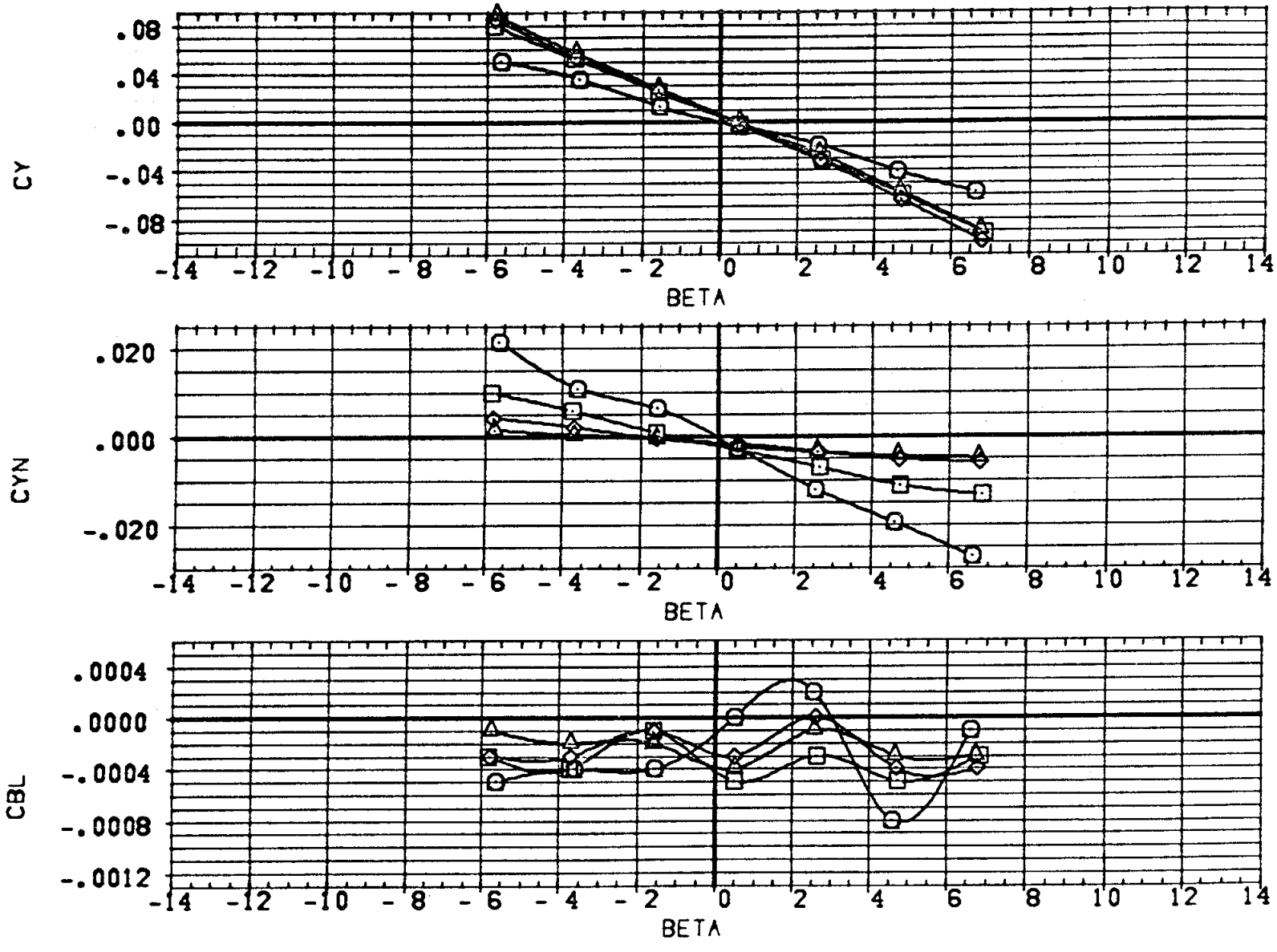
STABILITY CHARACTERISTICS - ORBITER ALONE, 01

MSFC 545 (1A1) MOD ATP LV-(T3)/(01) (A72107)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.602	ALPHA	.000	CONFIG	11.000
△	.903	RUDDER	.000	AILRON	.000
◇	1.000	ORBINC	.000	DELTAZ	.120
□	1.196	RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (A72107)

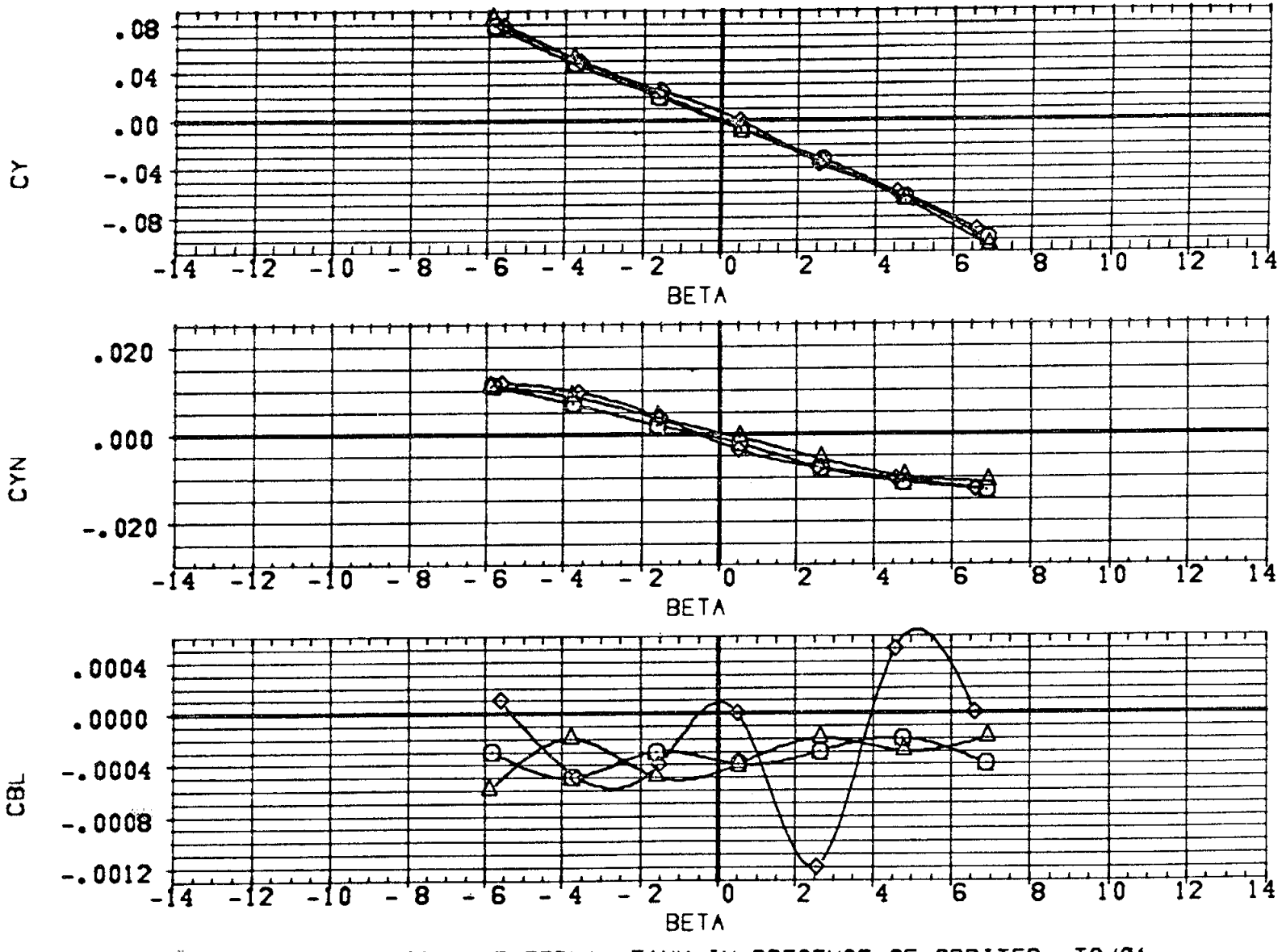
SYMBOL	MACH
○	1.464
△	1.956
◇	4.960

PARAMETRIC VALUES

ALPHA	.000	CONFIG	11.000
RUDDER	.000	AILRON	.000
ORBINC	.000	DELTAZ	.120
RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

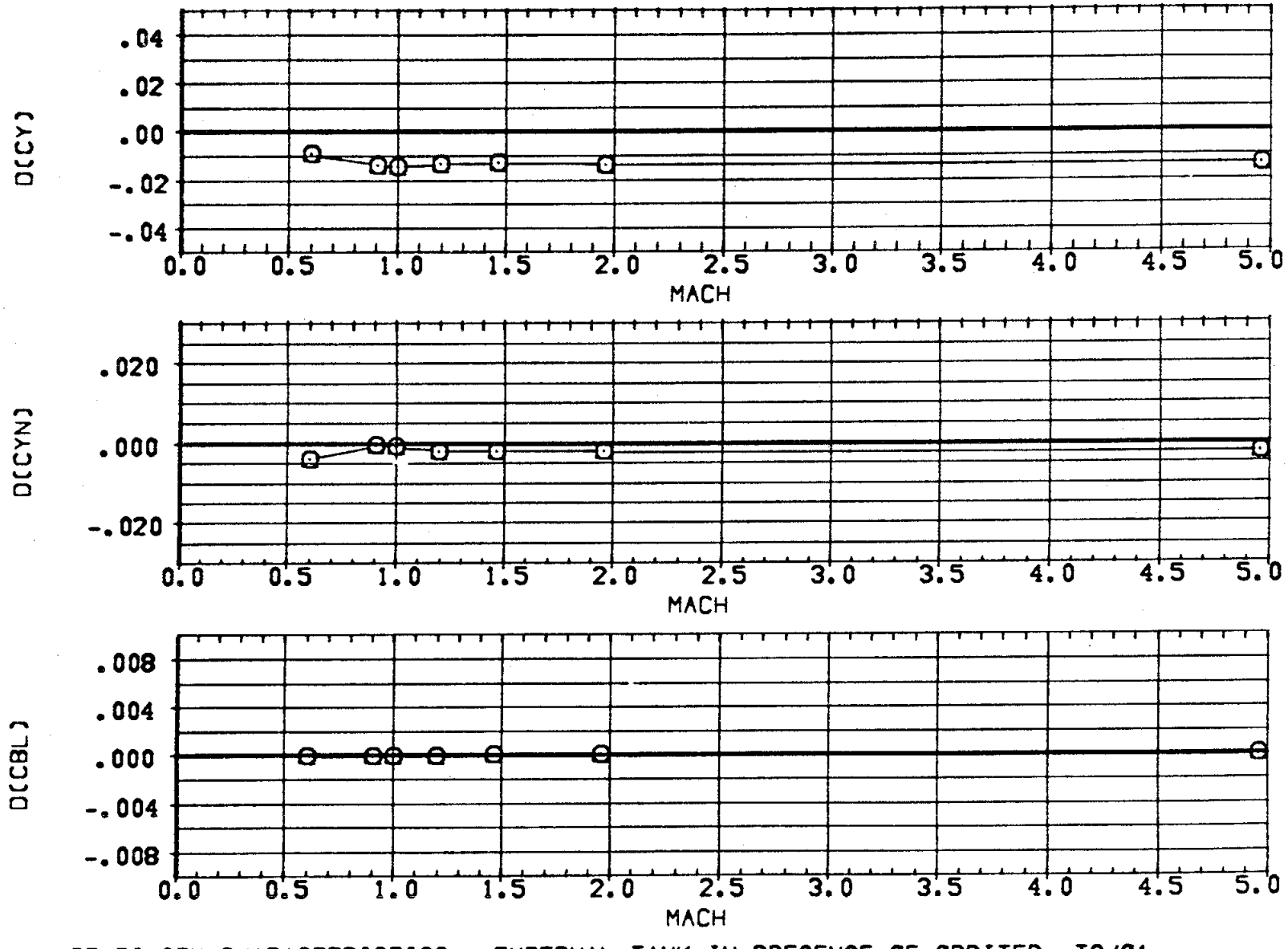
MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (A72107)

PARAMETRIC VALUES

ALPHA	.000	CONFIG	11.000
RUDDER	.000	AILRON	.000
ORBINC	.000	DELTAZ	.120
RUDFLR	10.000	ELEVTR	.000

REFERENCE INFORMATION

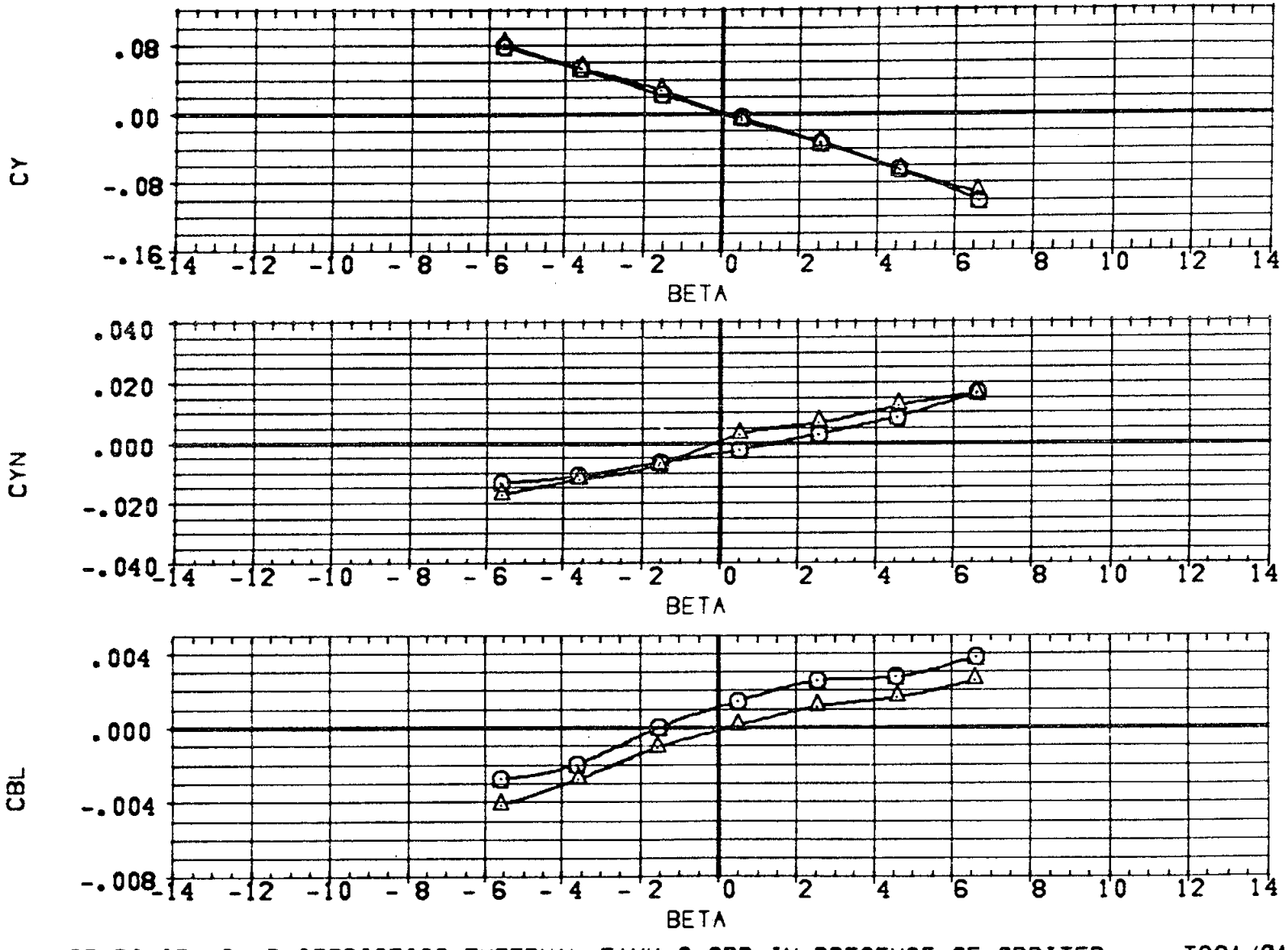
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EXTERNAL TANK IN PRESENCE OF ORBITER, T3/01

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2114)	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	.000	.120	10.000	.000
(AP2126)	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

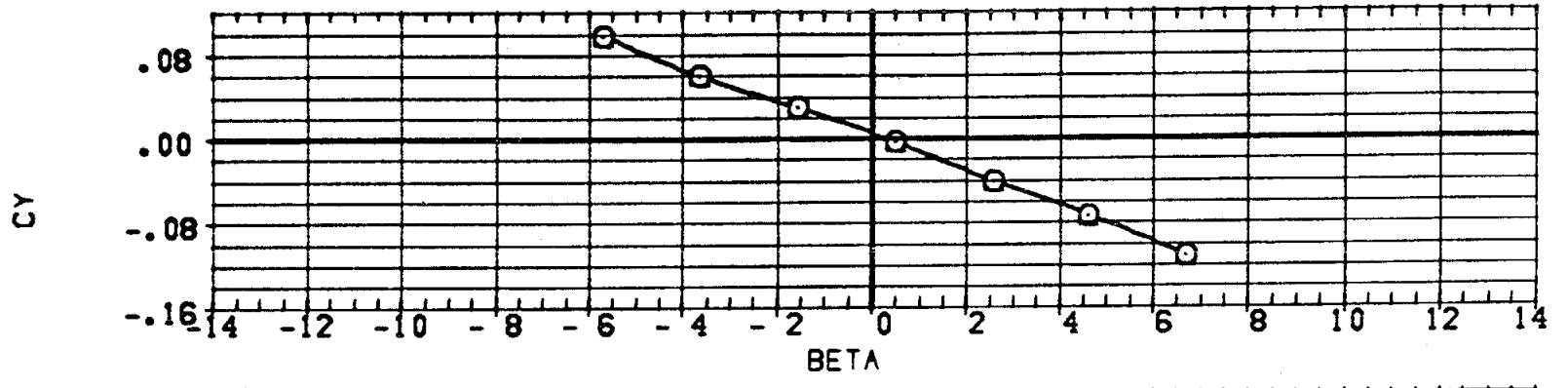


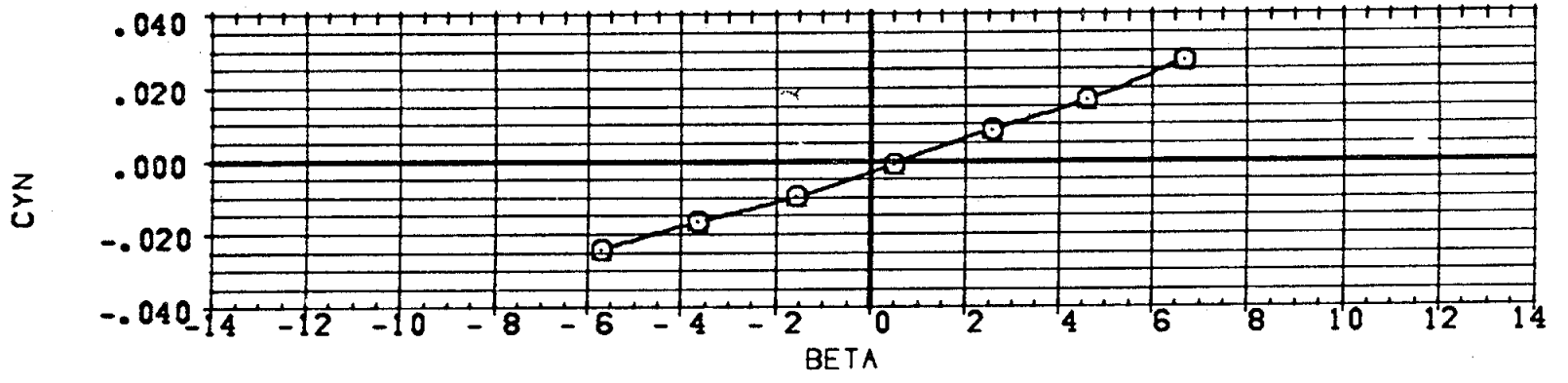
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

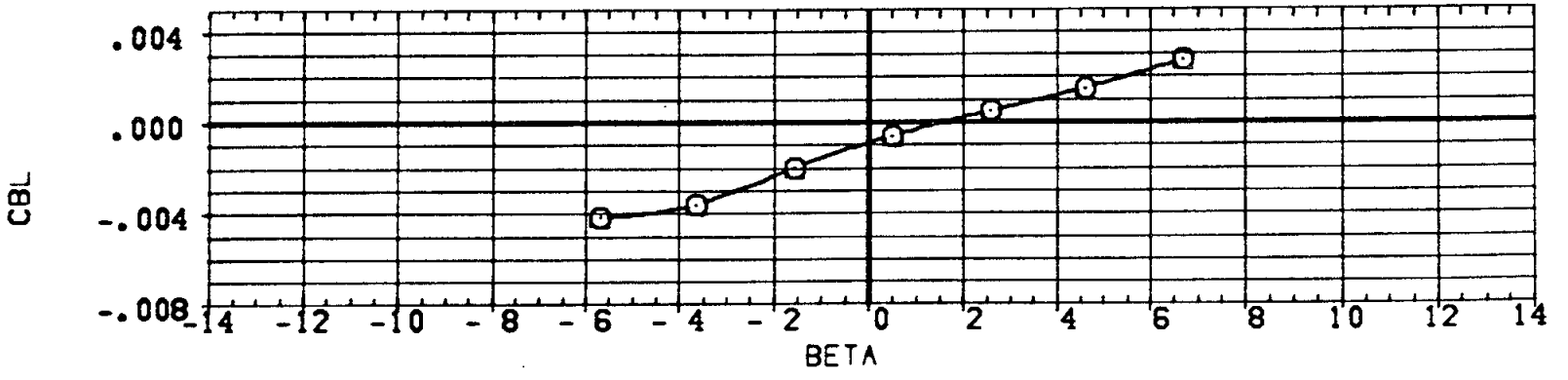
(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72114)	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	.000	.120	10.000	.000
(A72120)	DATA NOT AVAILABLE	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





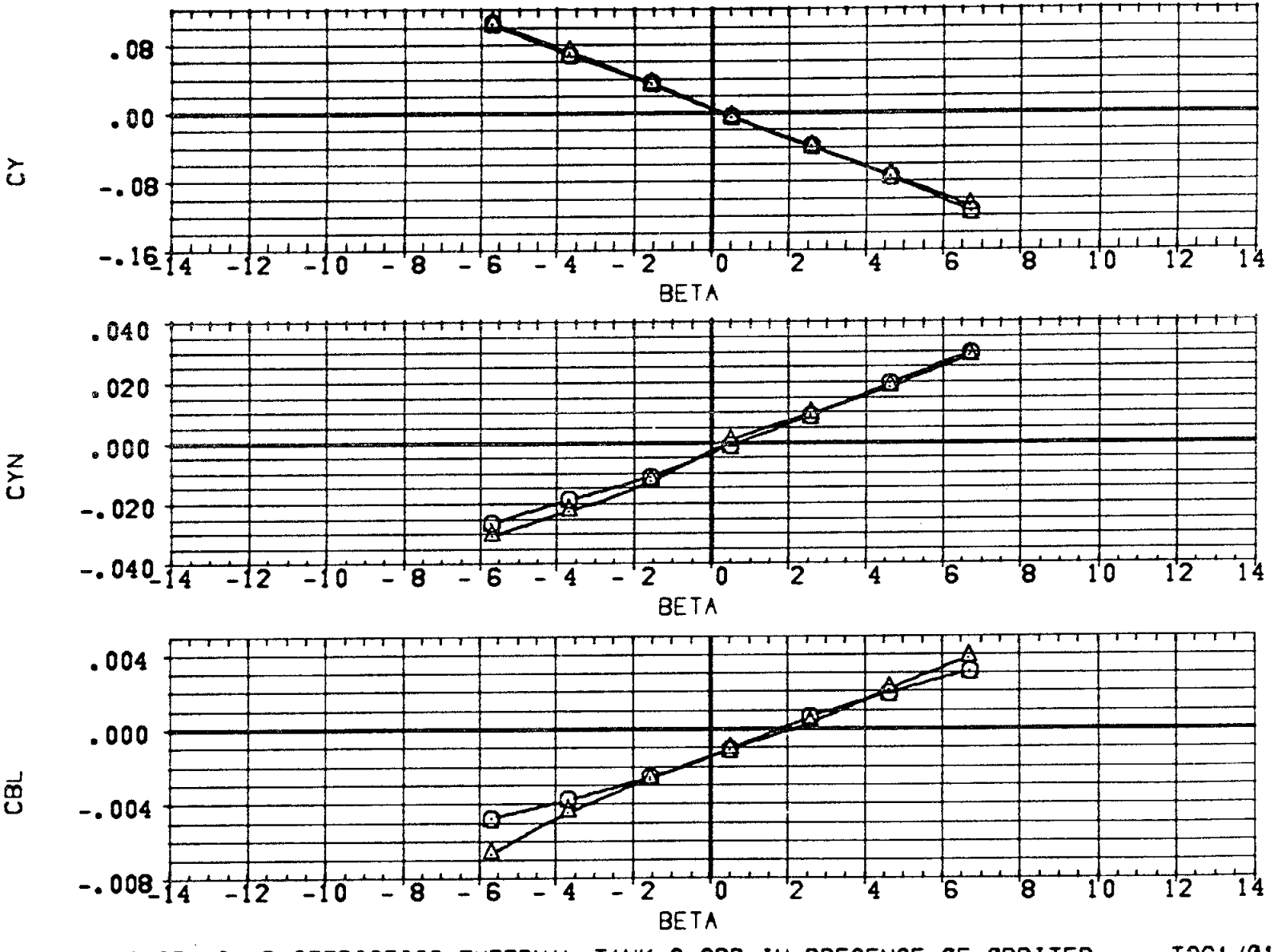


STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(B)MACH = .80

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72114)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72128)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

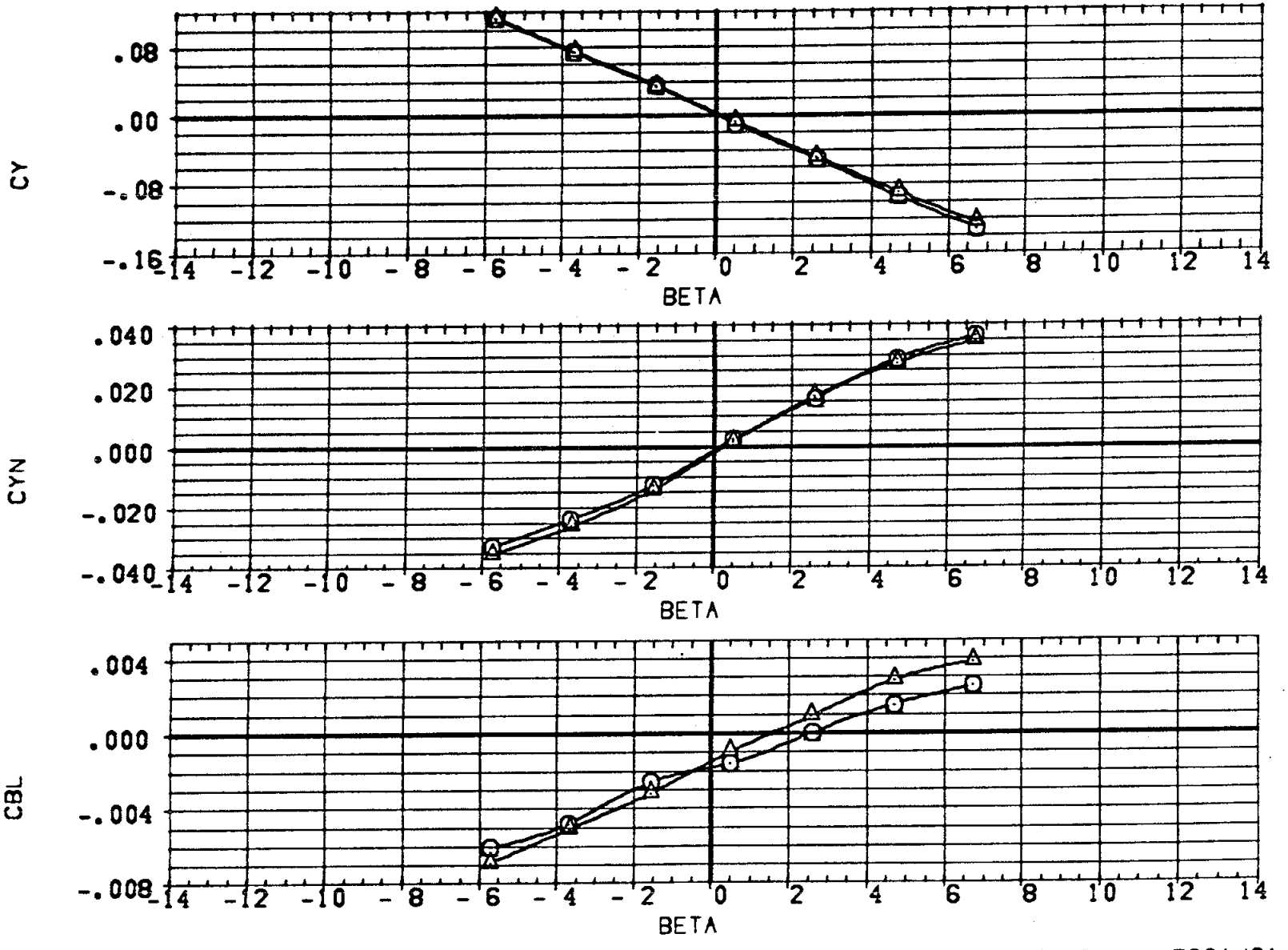


STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(C)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUOFLR	X-SRB
(AP2114) ○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(AP2128) △	MSFC 545 (IA1) MOD ATP LV-(T5)(S1)/(O1)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

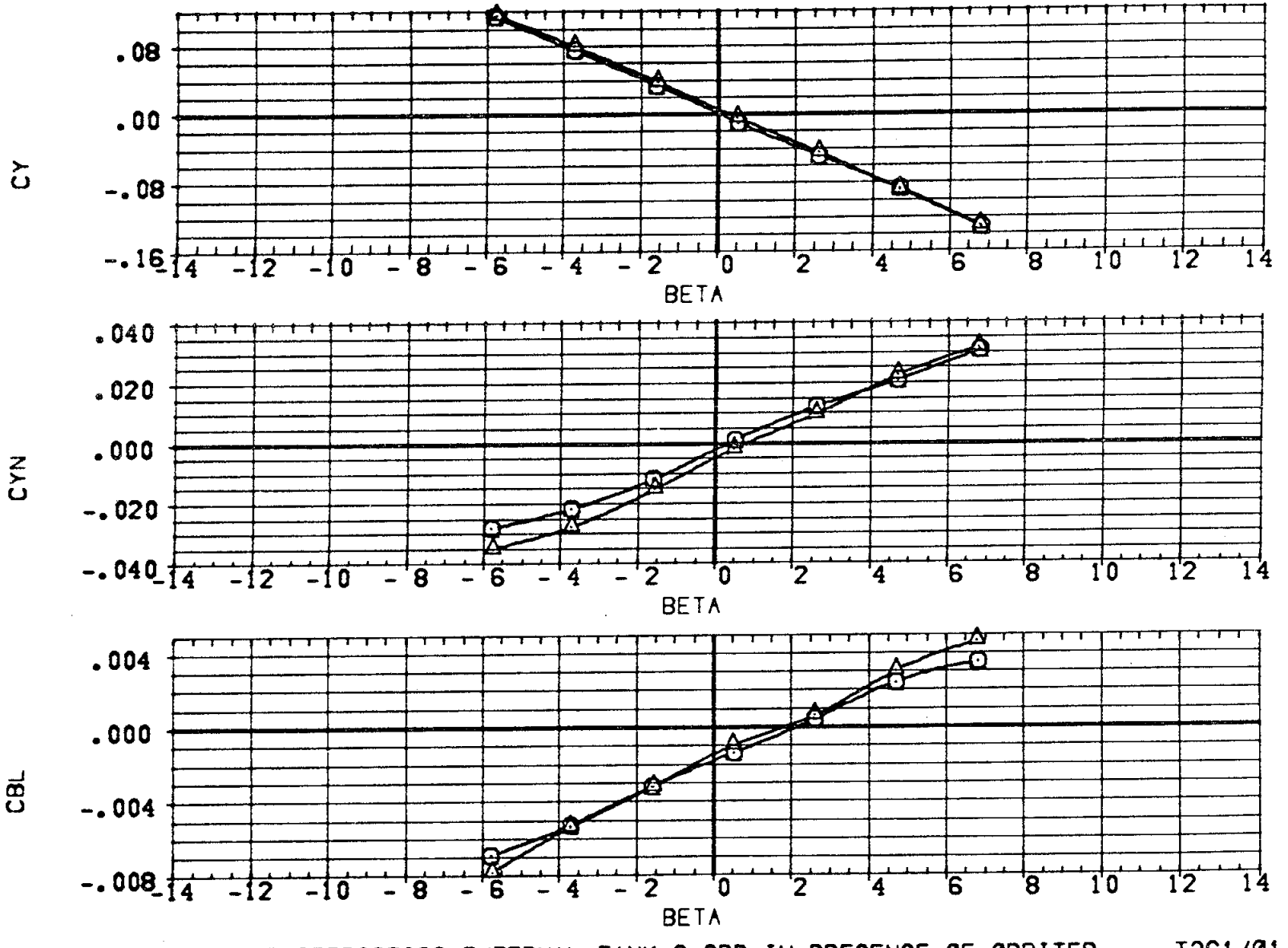


STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(D)MACH = .99

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2114)	○	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(01)	.000	.120	10.000	.000
(AP2126)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



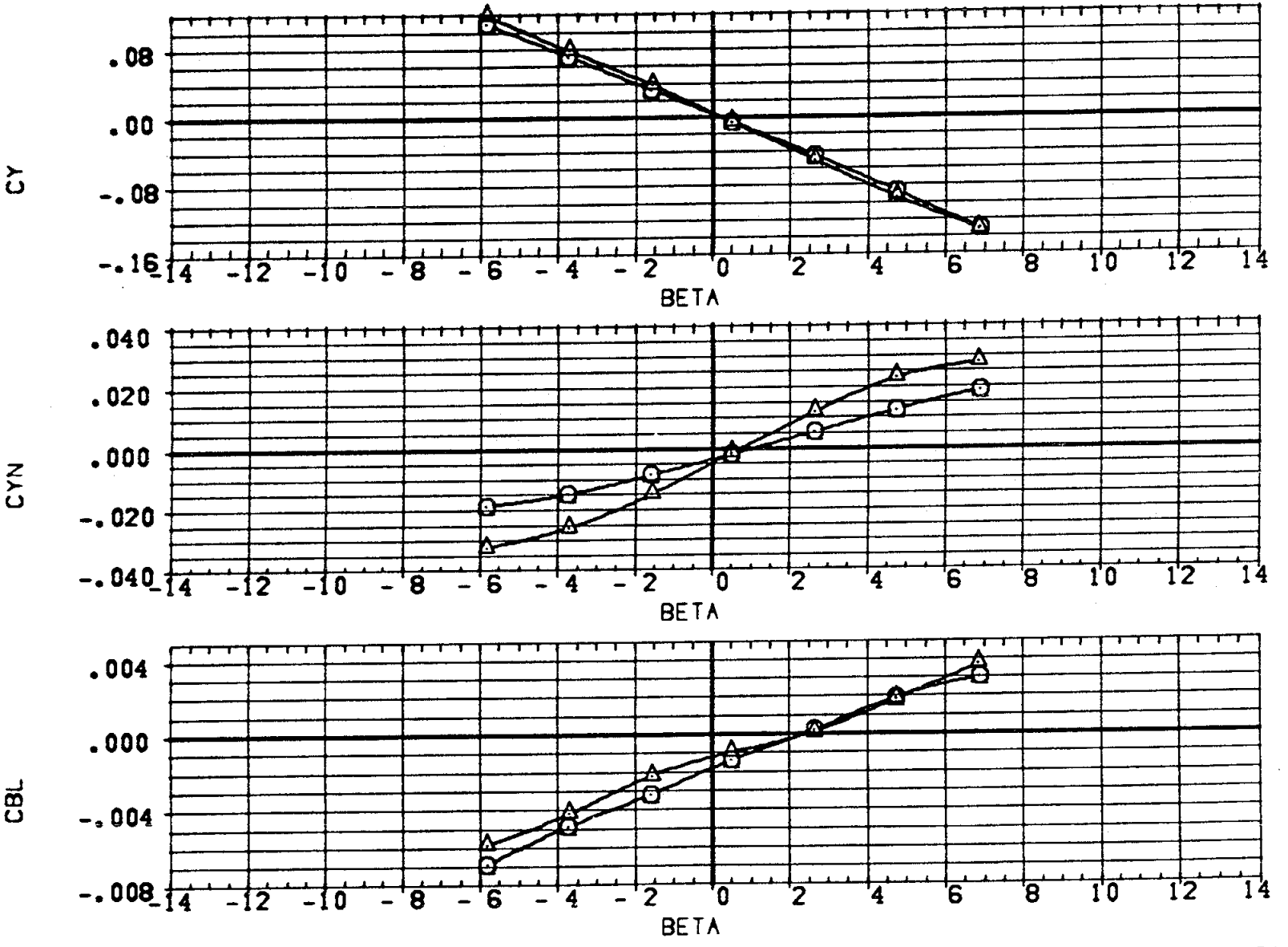
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2114)	○	MSFC 54S (IA1) MOD ATP LV-(TS)(S1)/(O1)	.000	.120	10.000	.000
(AP2128)	△	MSFC 54S (IA1) MOD ATP LV-(TS)(S1)/(O1)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

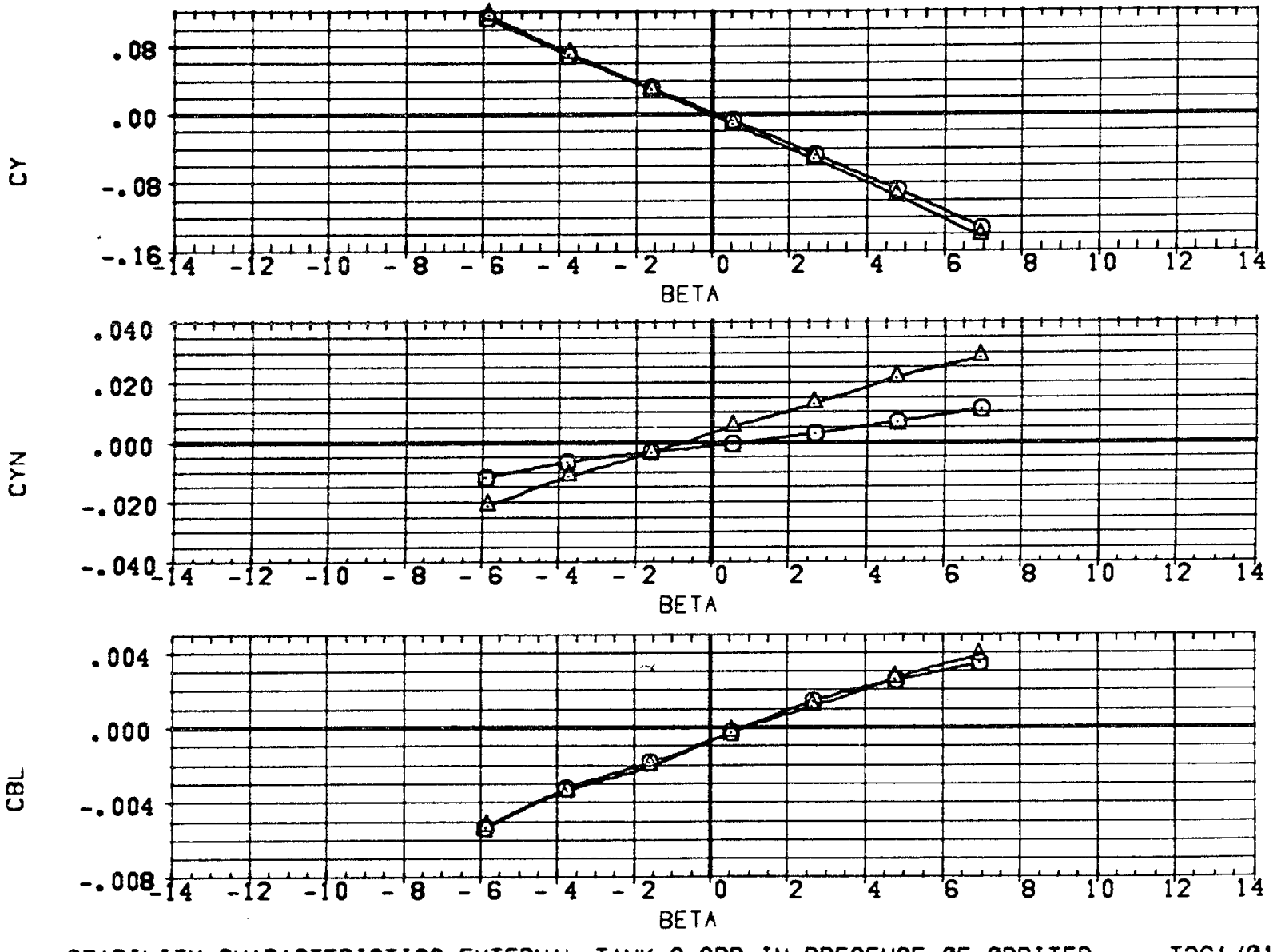


STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(F)MACH = 1.47

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72114)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(81)/(01)	.000	.120	10.000	.000
(A72126)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(61)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

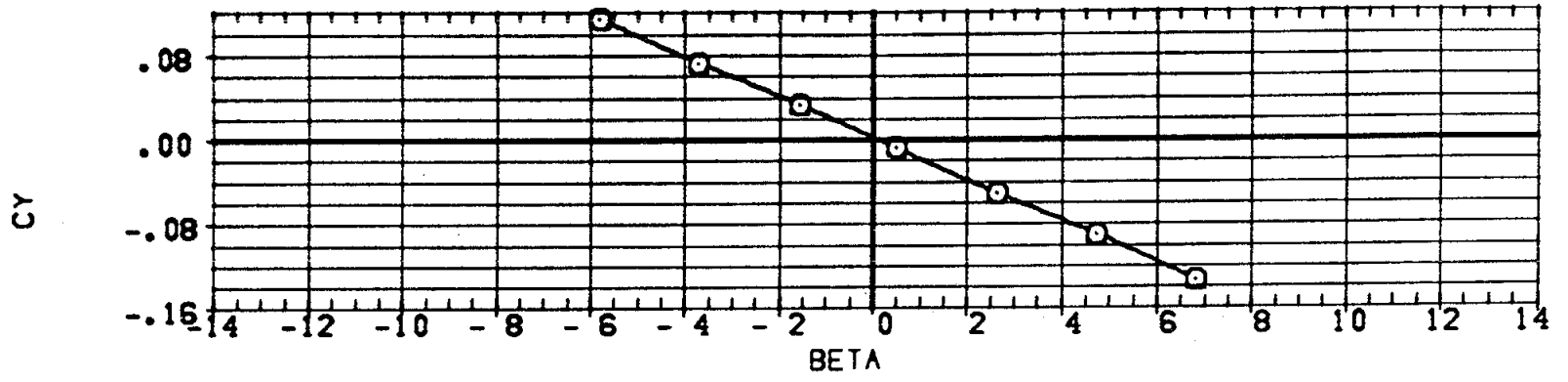


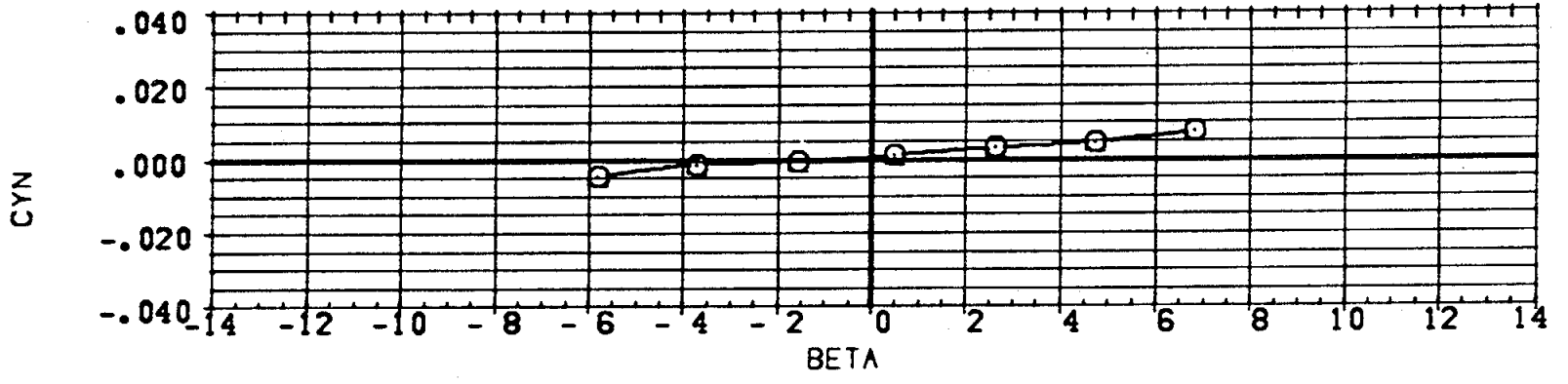
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

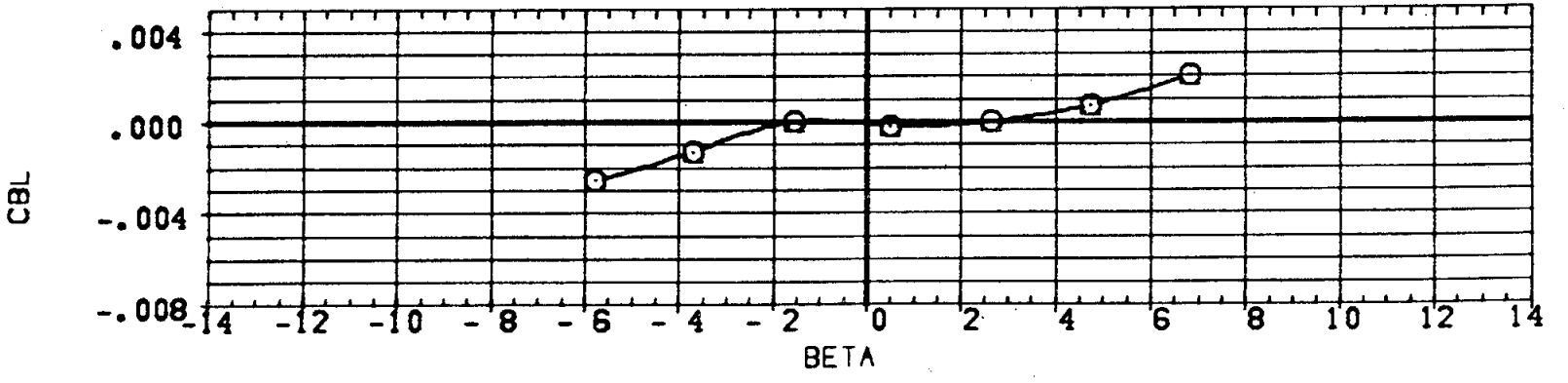
(G)MACH = 1.96

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2114)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01)	.000	.120	10.000	.000
(AY2126)	△	DATA NOT AVAILABLE	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





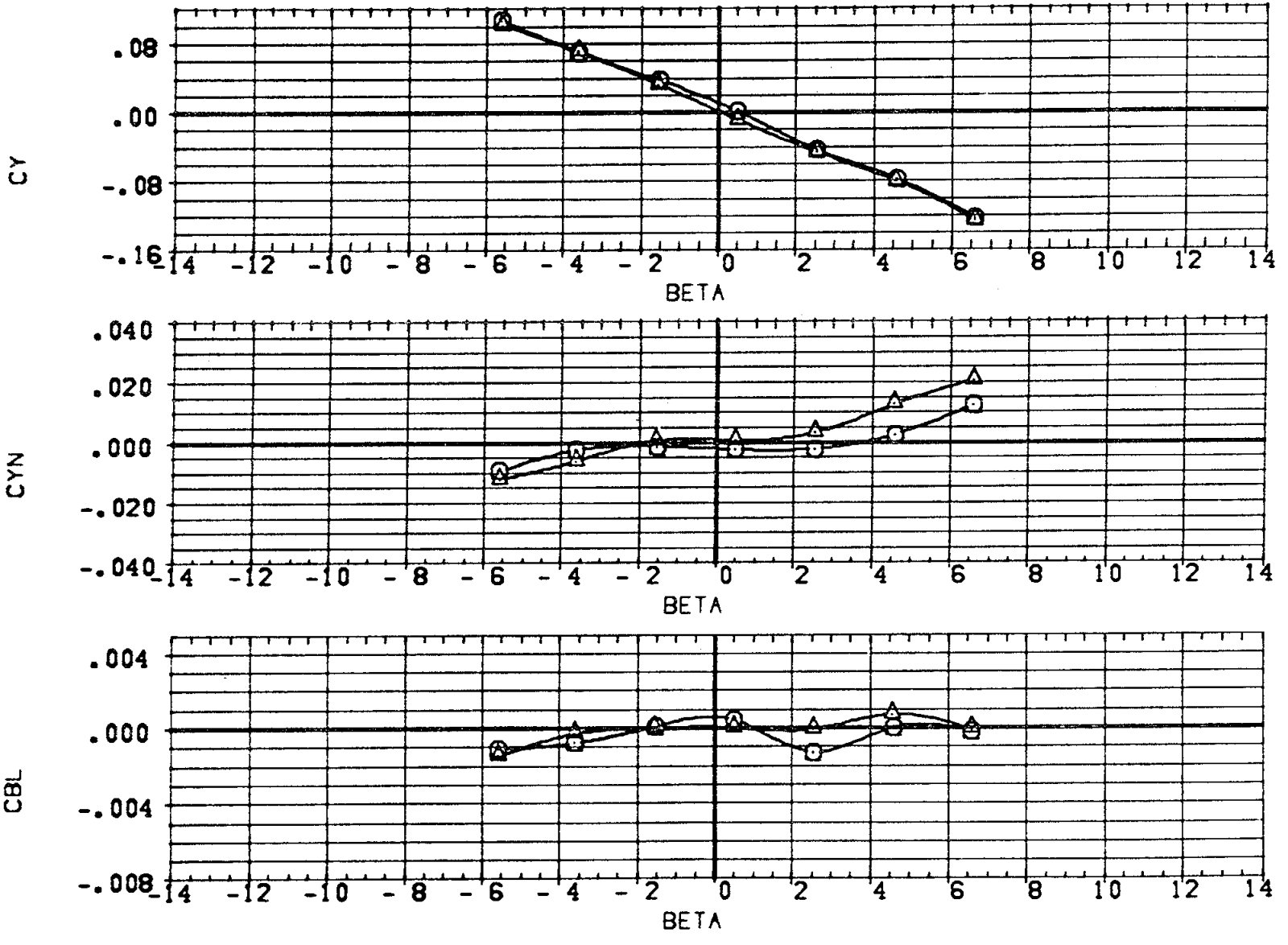


STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2114)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(AP2128)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



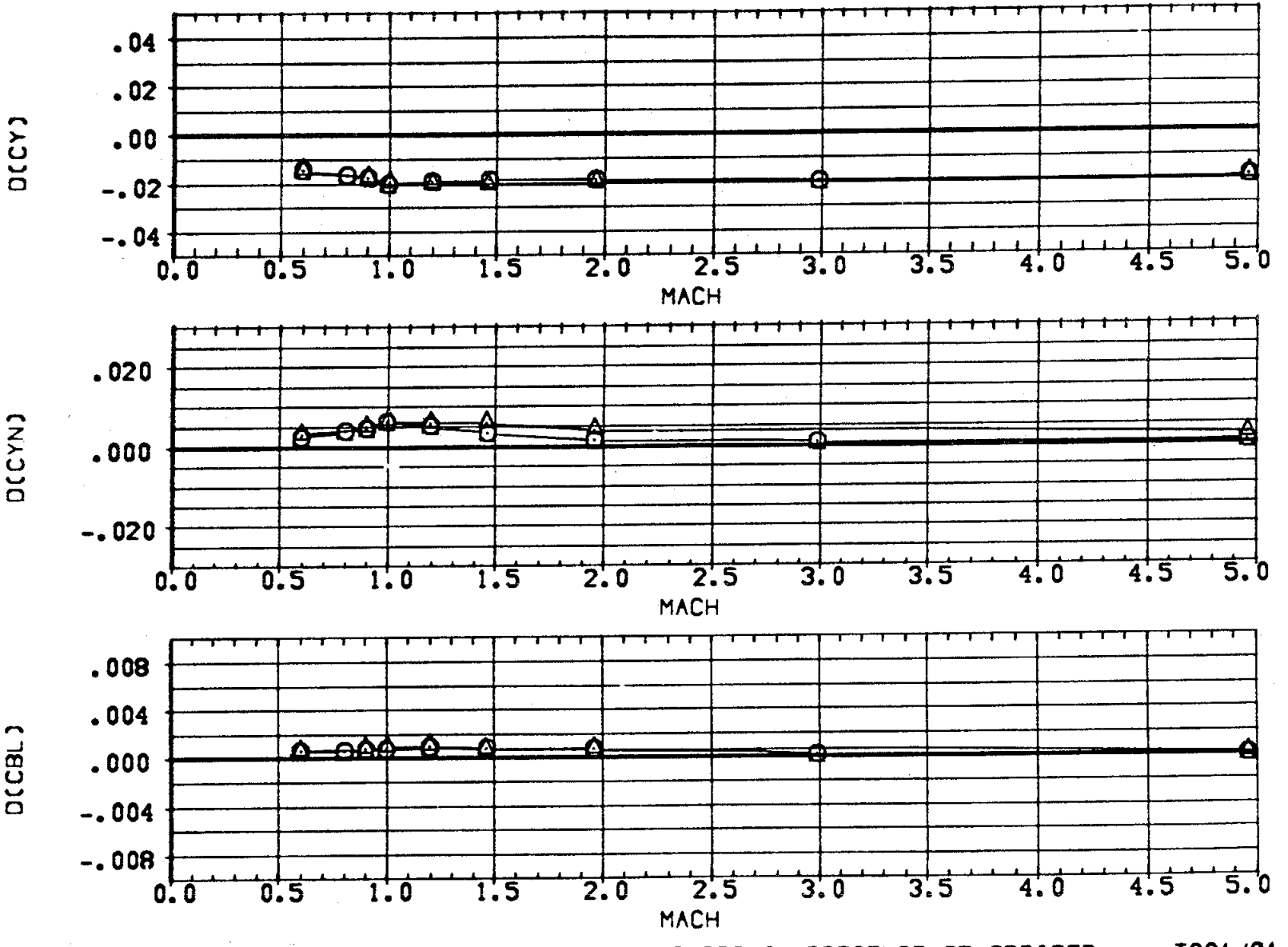
STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

(1)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72114)	○	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72128)	△	MSFC 545 (1A1) MOD ATP LV-(T5)(S1)/(O1)	.000	.120	10.000	-.624

REFERENCE INFORMATION

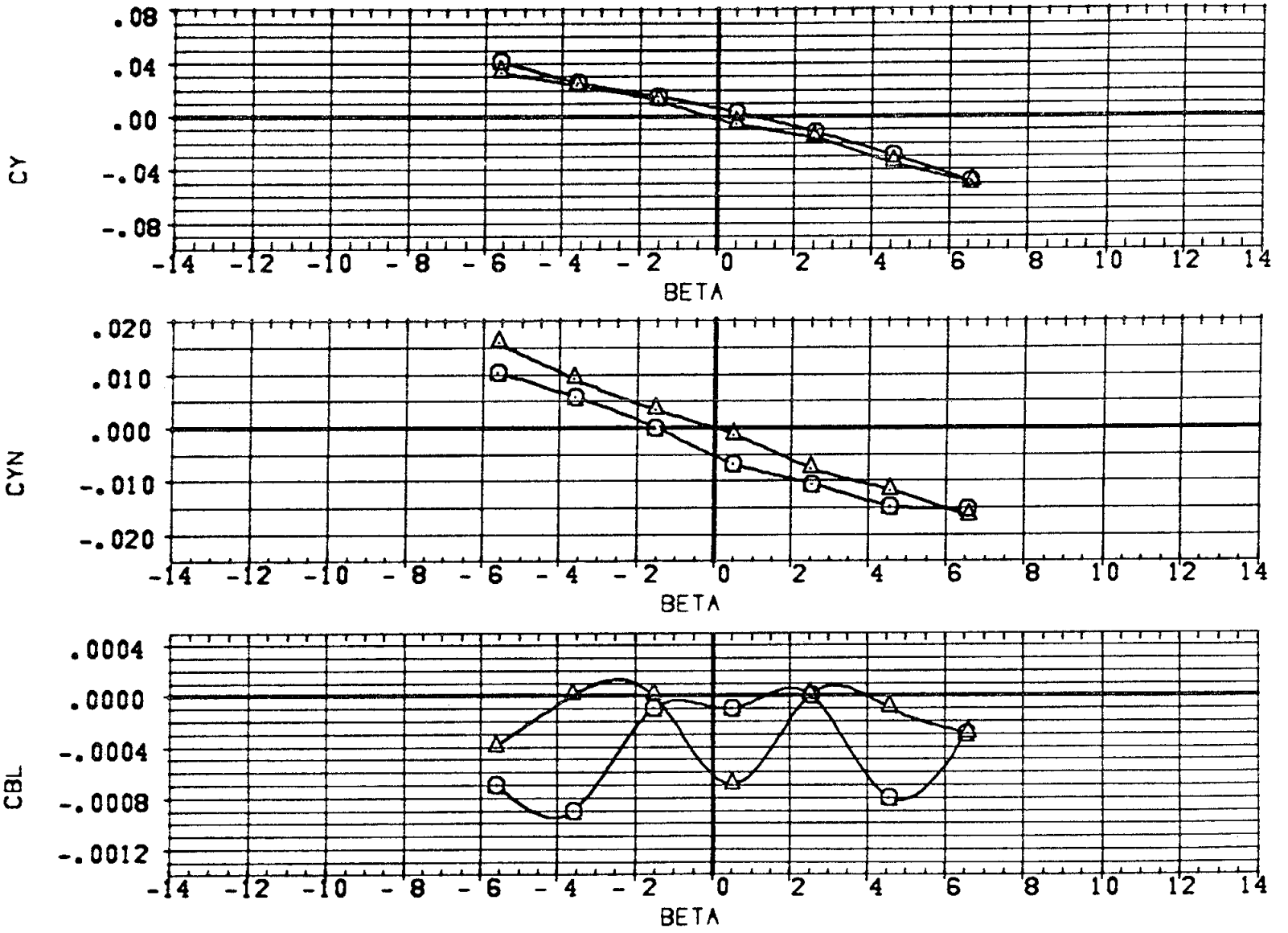
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS-EXTERNAL TANK 2 SRB IN PRESENCE OF ORBITER, T3S1/01

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2121)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(AP2139)	△	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

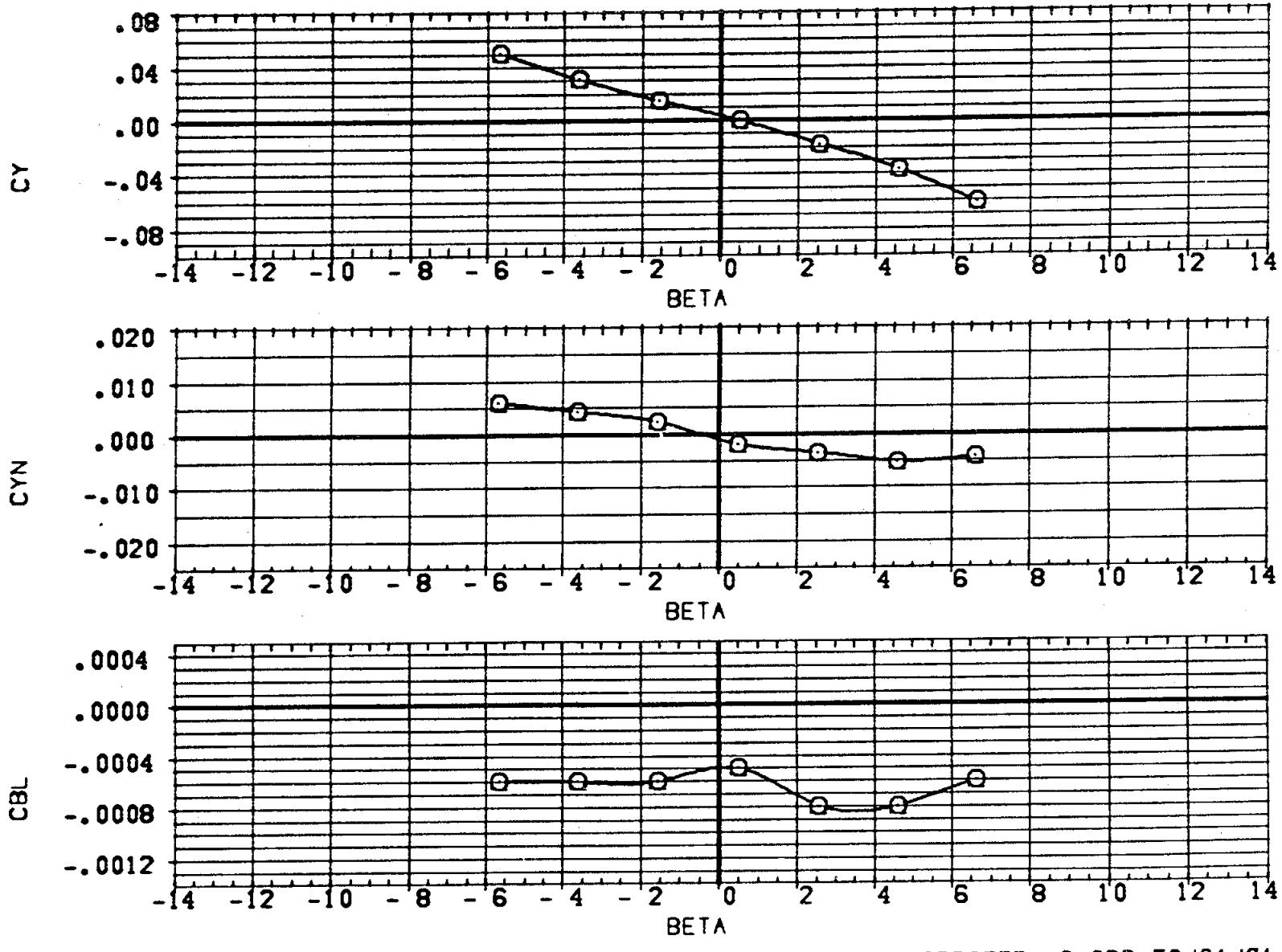


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(A)MACH = .60

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2121)	○	HSPC 945 (IA1) MOD ATP LV-(TS)/(S1)/(01)	.000	.120	10.000	.000
(AY2139)	△	DATA NOT AVAILABLE	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



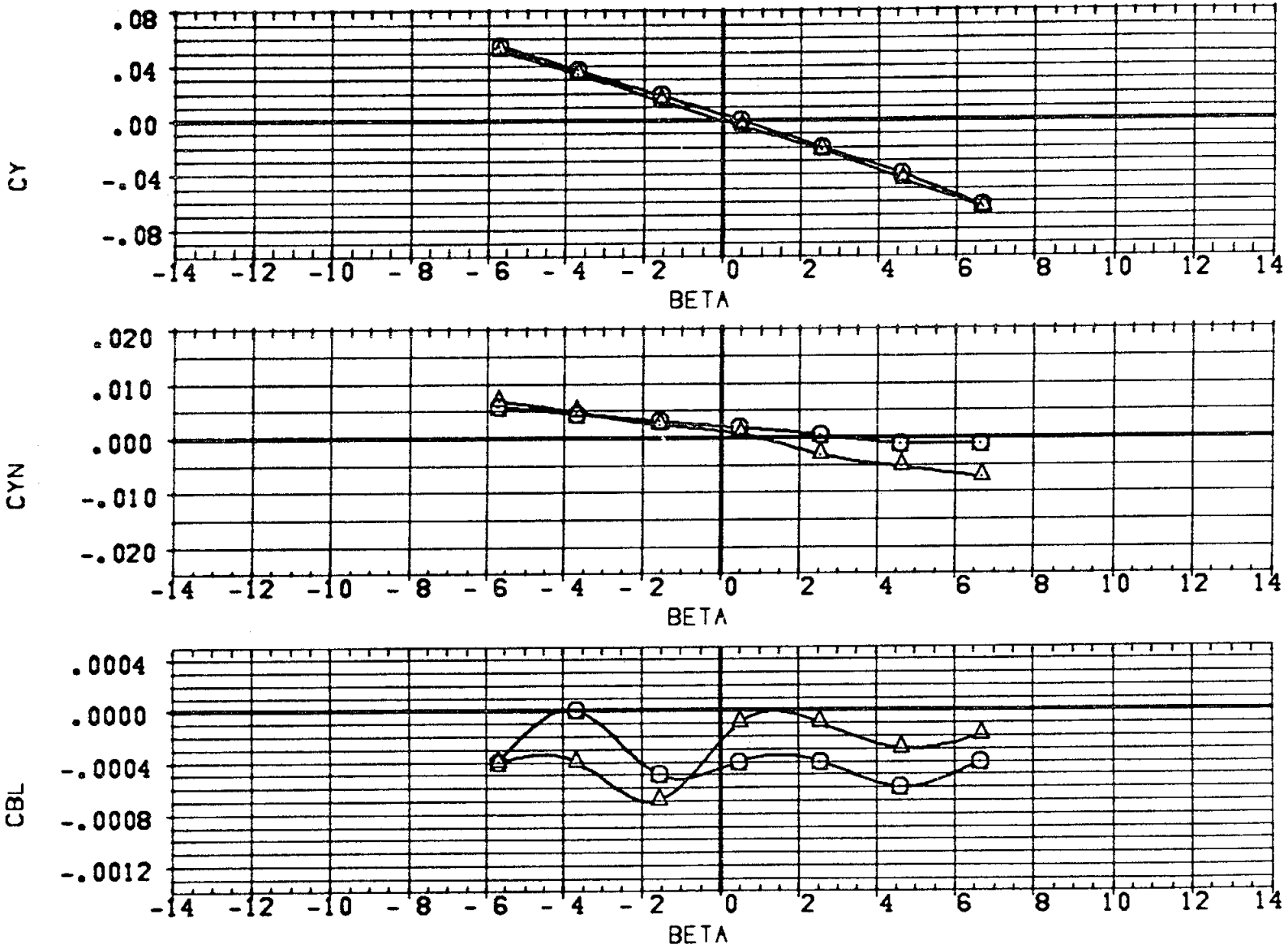
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(B)MACH = .80

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2121)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(AP2139)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

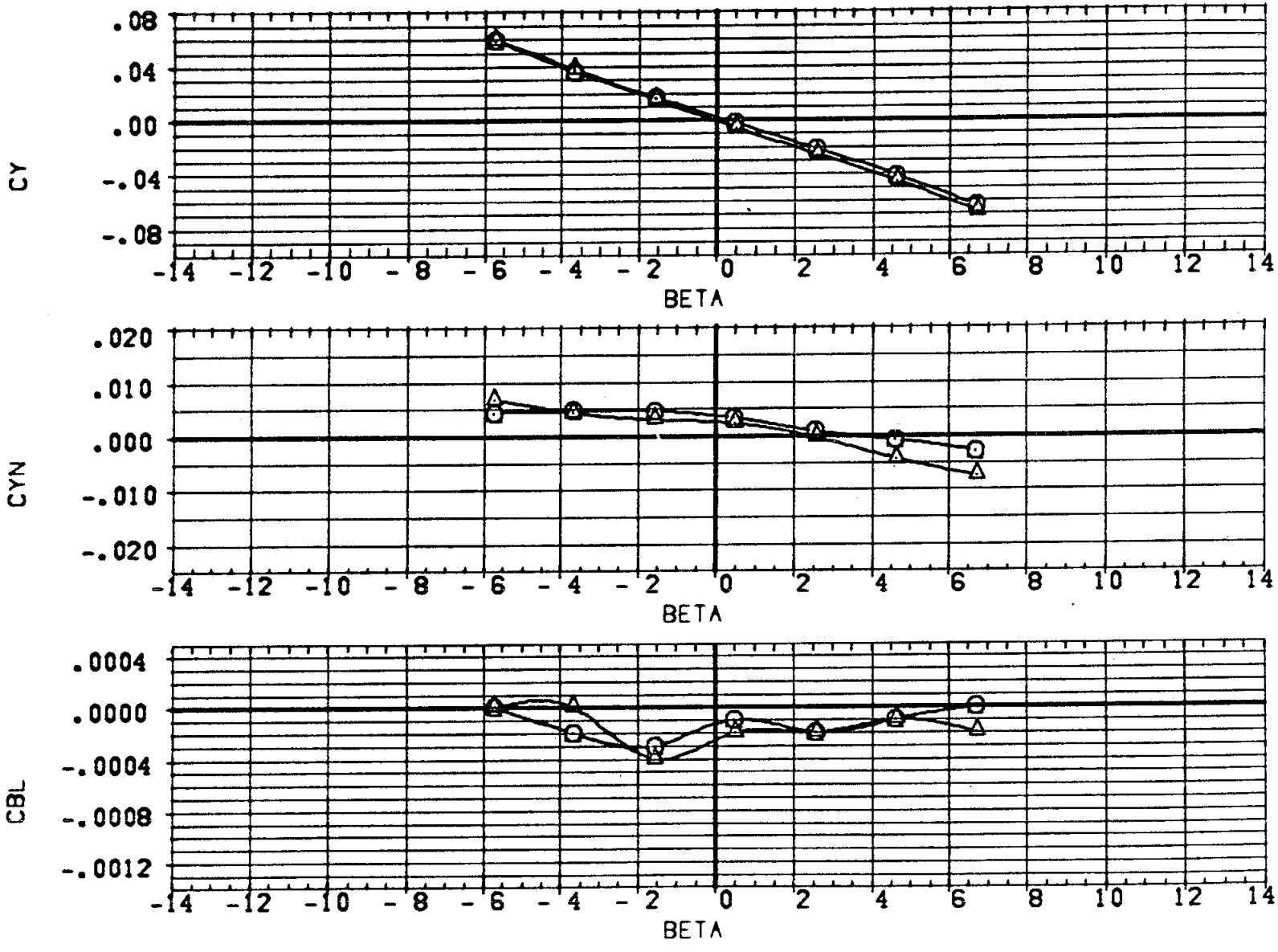


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(C)MACH = .90

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2121)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(AP2135)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

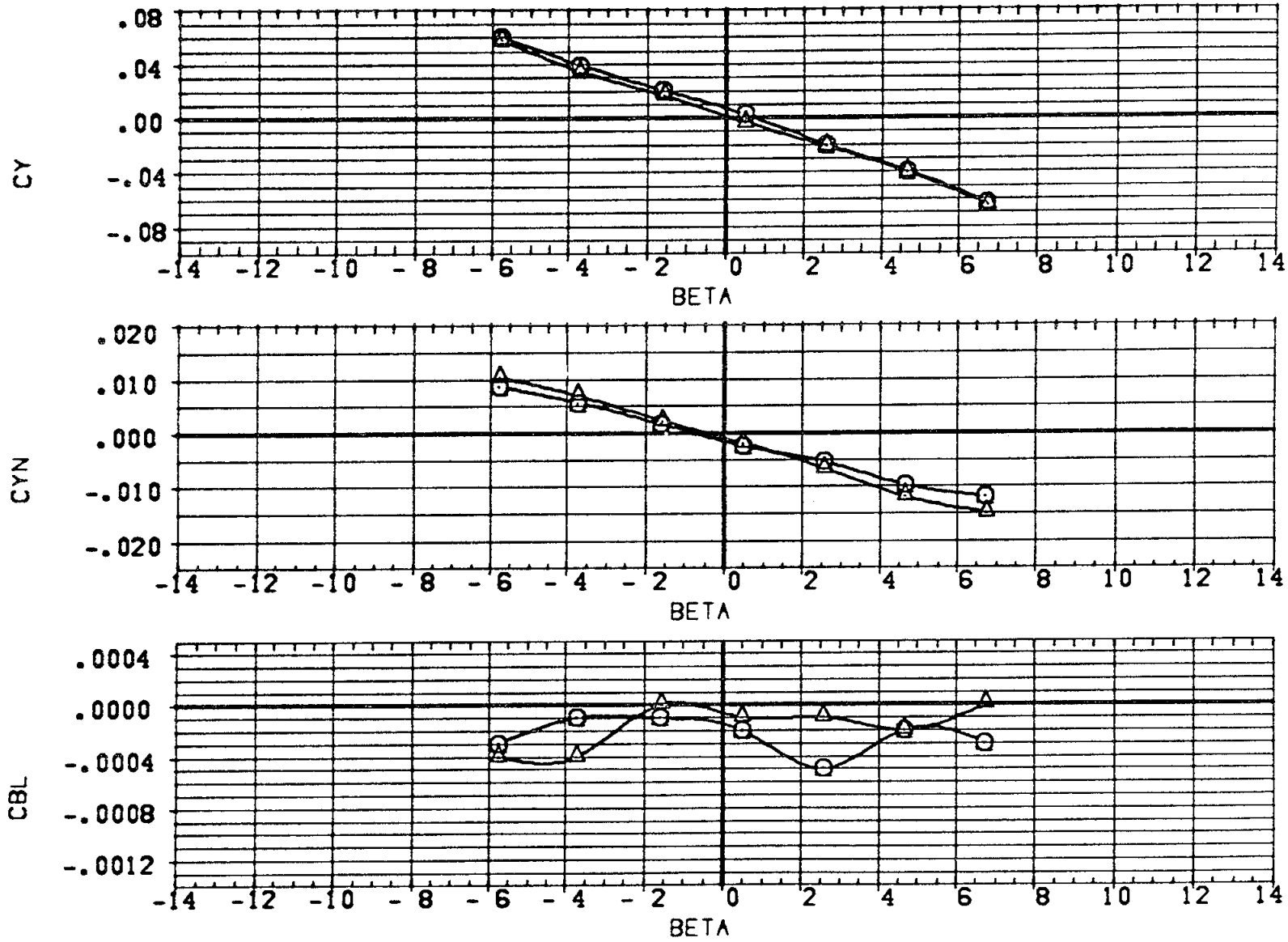


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(D)MACH = 1.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2121)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(AP2135)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	5220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



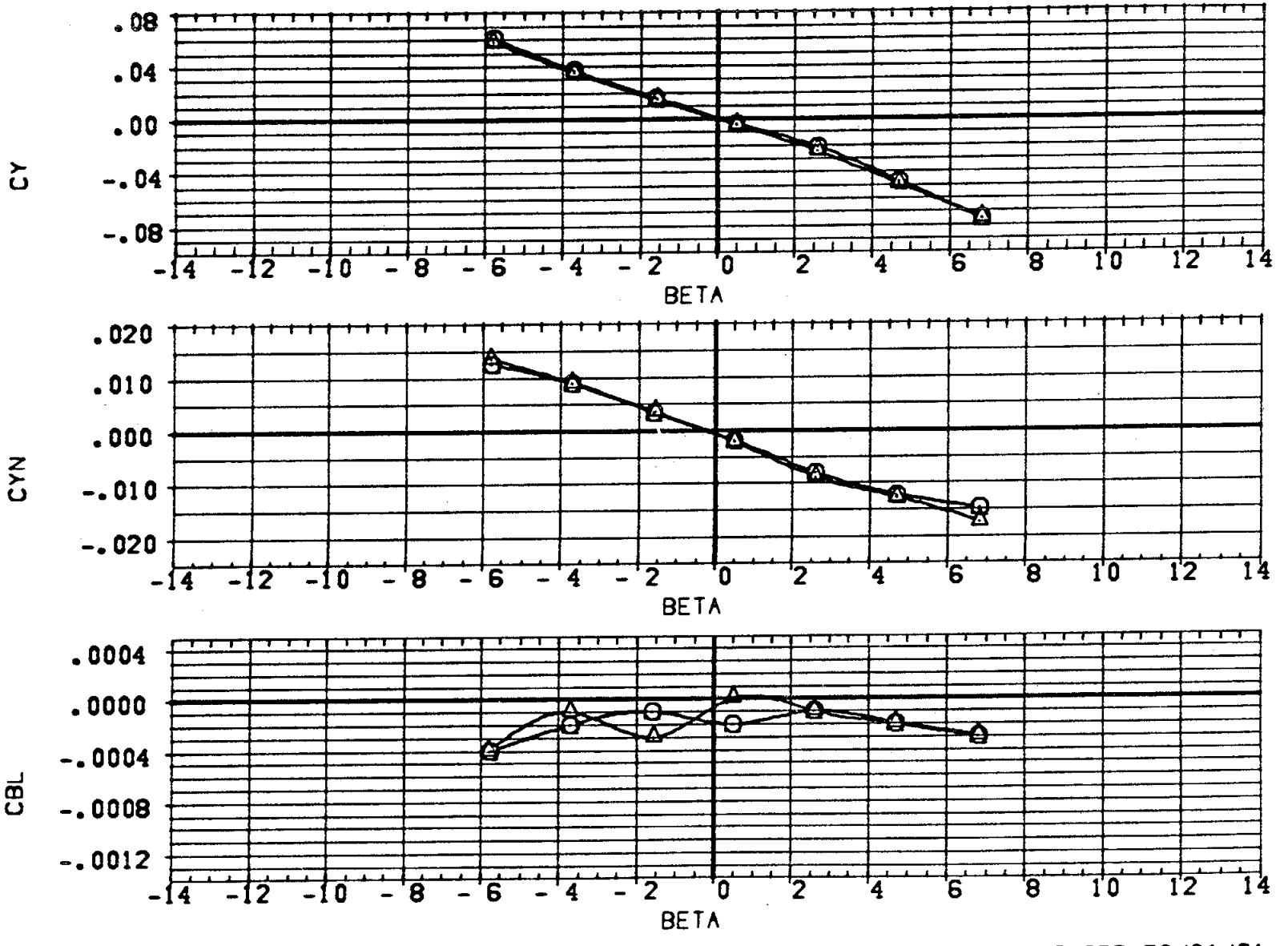
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72121)	○	MSFC 545 (IA1) MOD ATP LV-(T5)/(S1)/(O1)	.000	.120	10.000	.000
(A72135)	△	MSFC 545 (IA1) MOD ATP LV-(T5)/(S1)/(O1)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

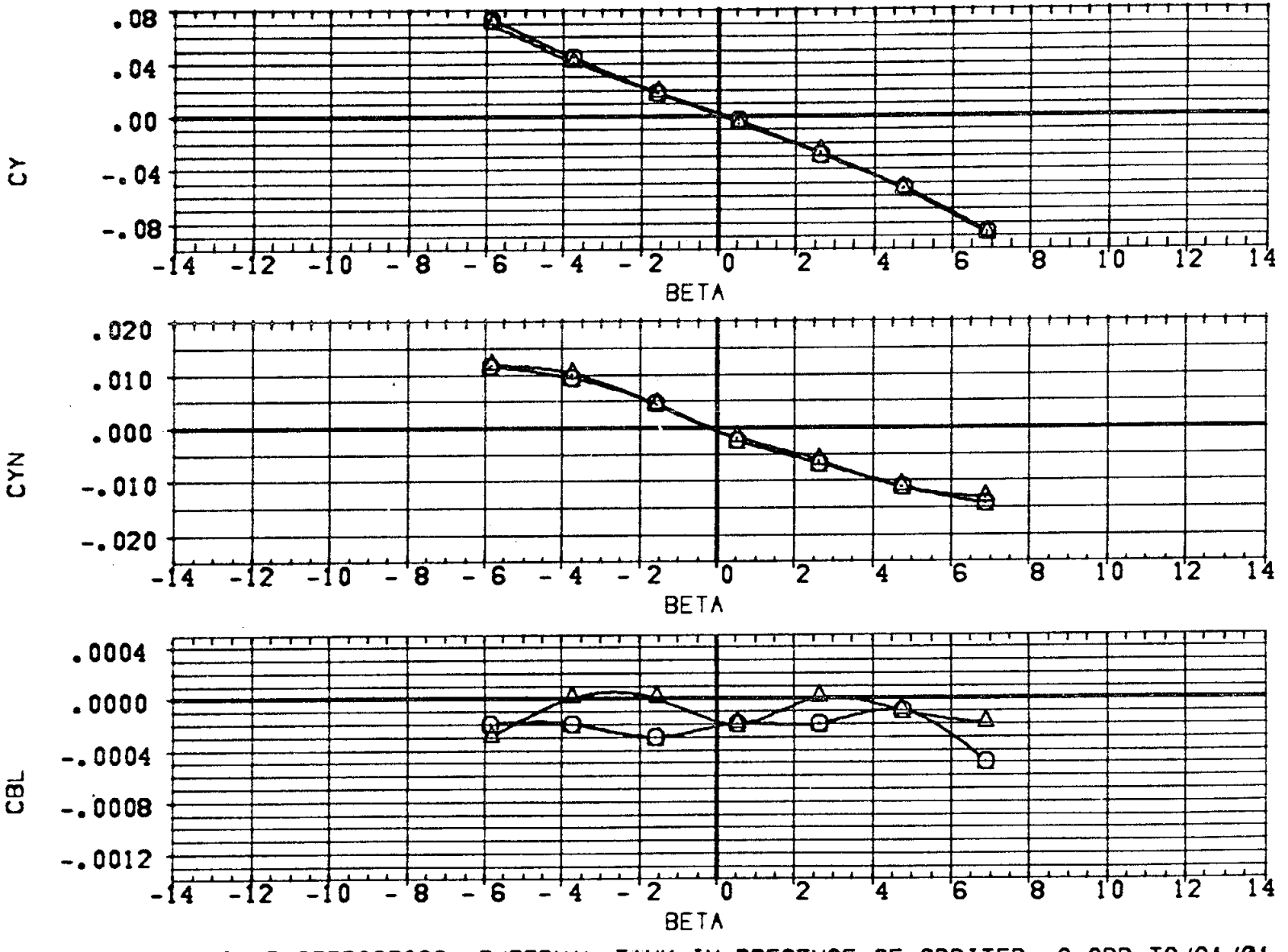


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72121)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(A72135)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

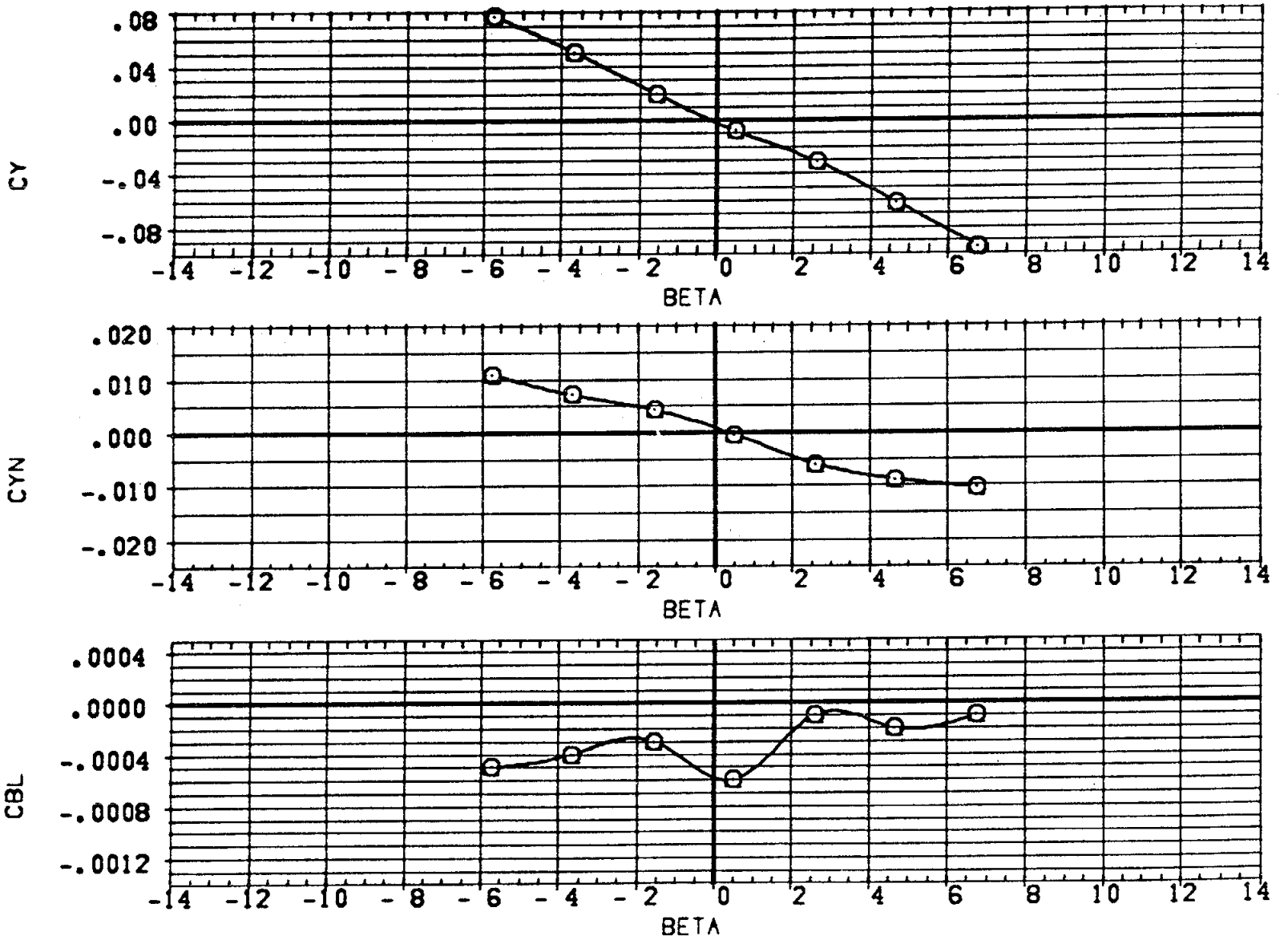


STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(G)MACH = 1.97

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A92121)	○	MSFC 365 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(A92135)	△	DATA NOT AVAILABLE	.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3280.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



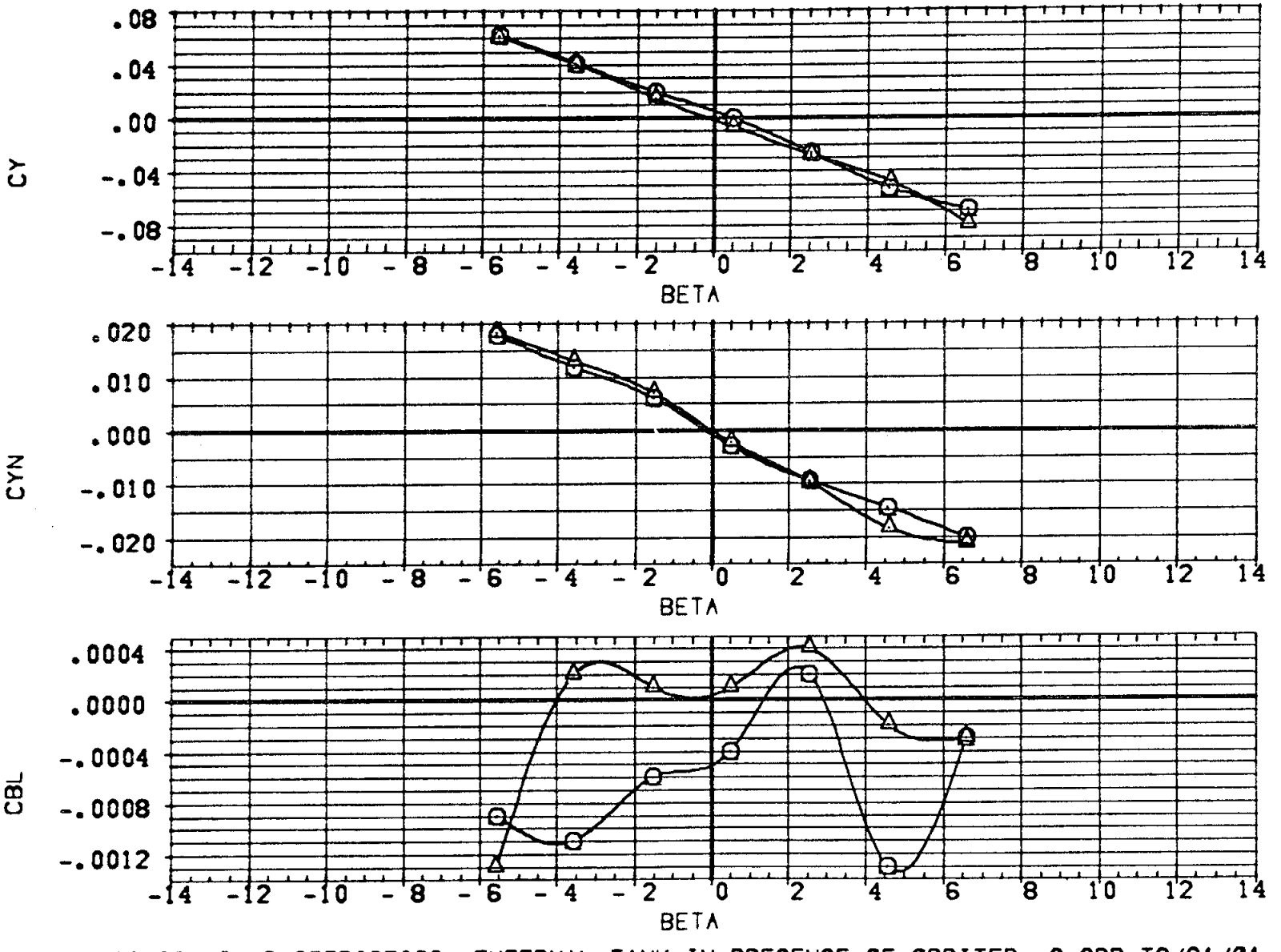
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72121)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(A72139)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



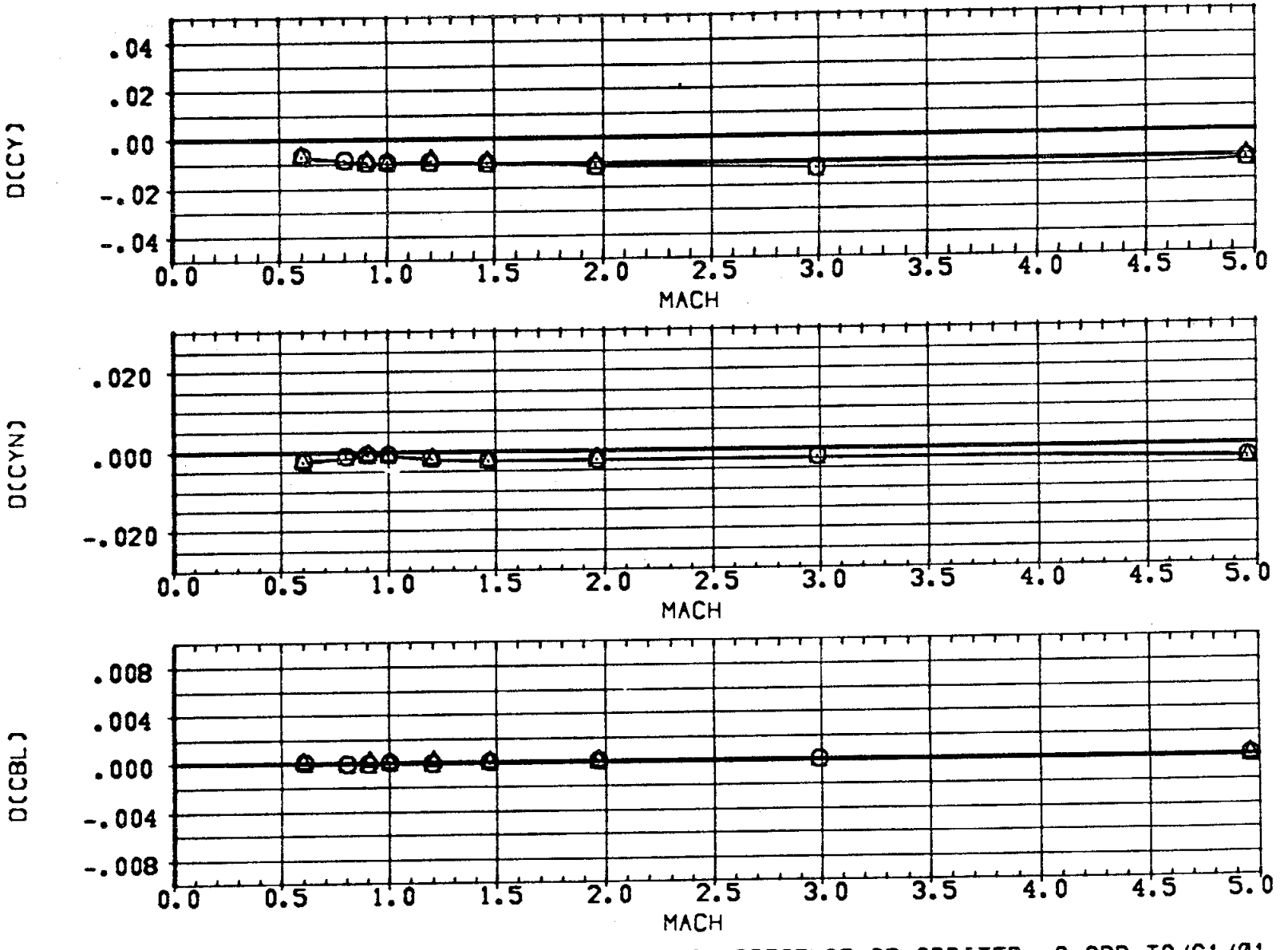
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

(I)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2121)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	.000
(AY2135)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



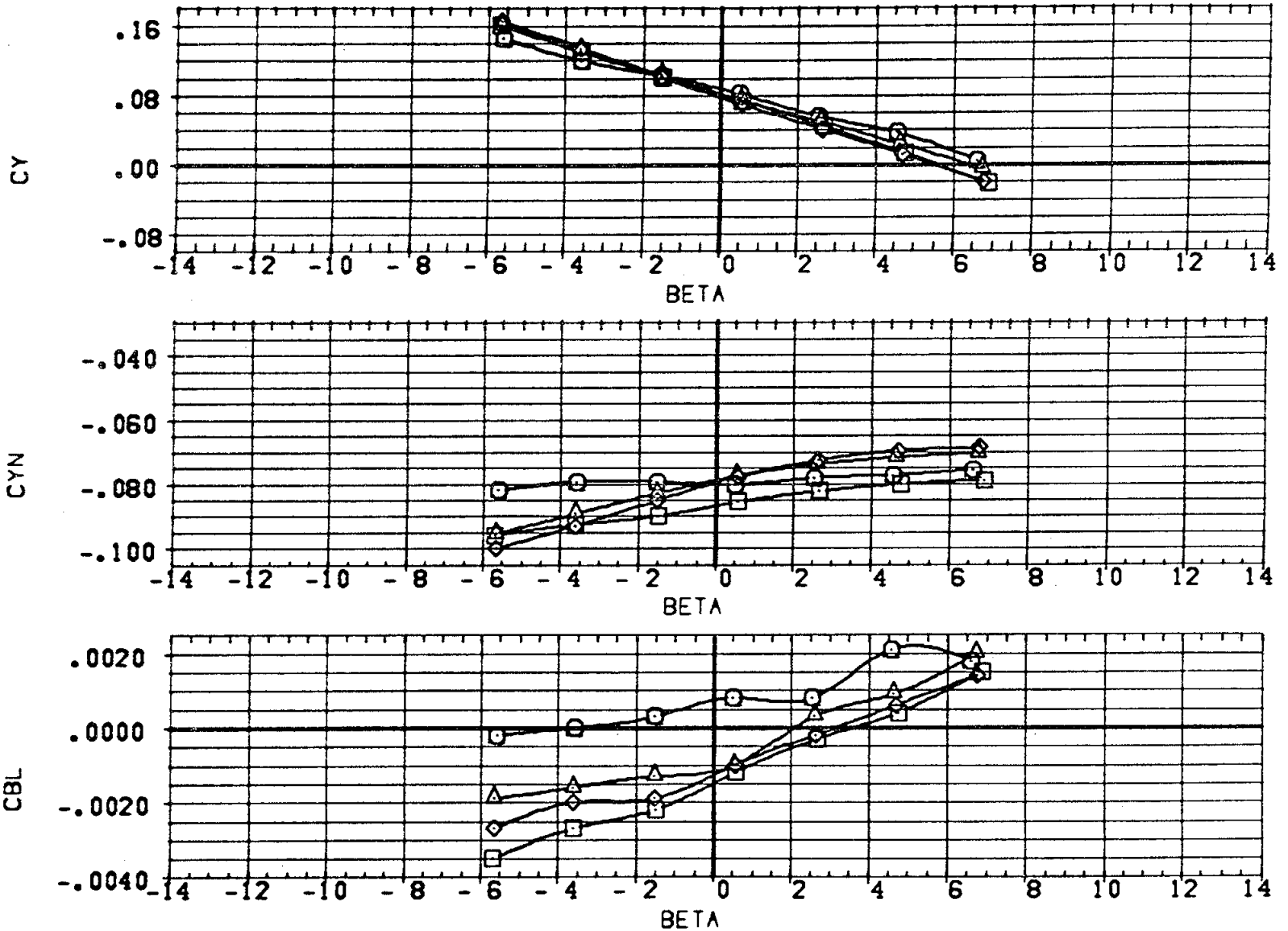
STABILITY CHARACTERISTICS- EXTERNAL TANK IN PRESENCE OF ORBITER, 2 SRB T3/S1/01

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01IA72142)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.601	ALPHA	.000	CONFIG	14.000
△	.898	RUDDER	.000	AILRON	.000
◇	1.000	ORBINC	.000	DELTAZ	.120
□	1.198	X-SRB	.000	RUDFLR	10.000
		ELEVTR	.000		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



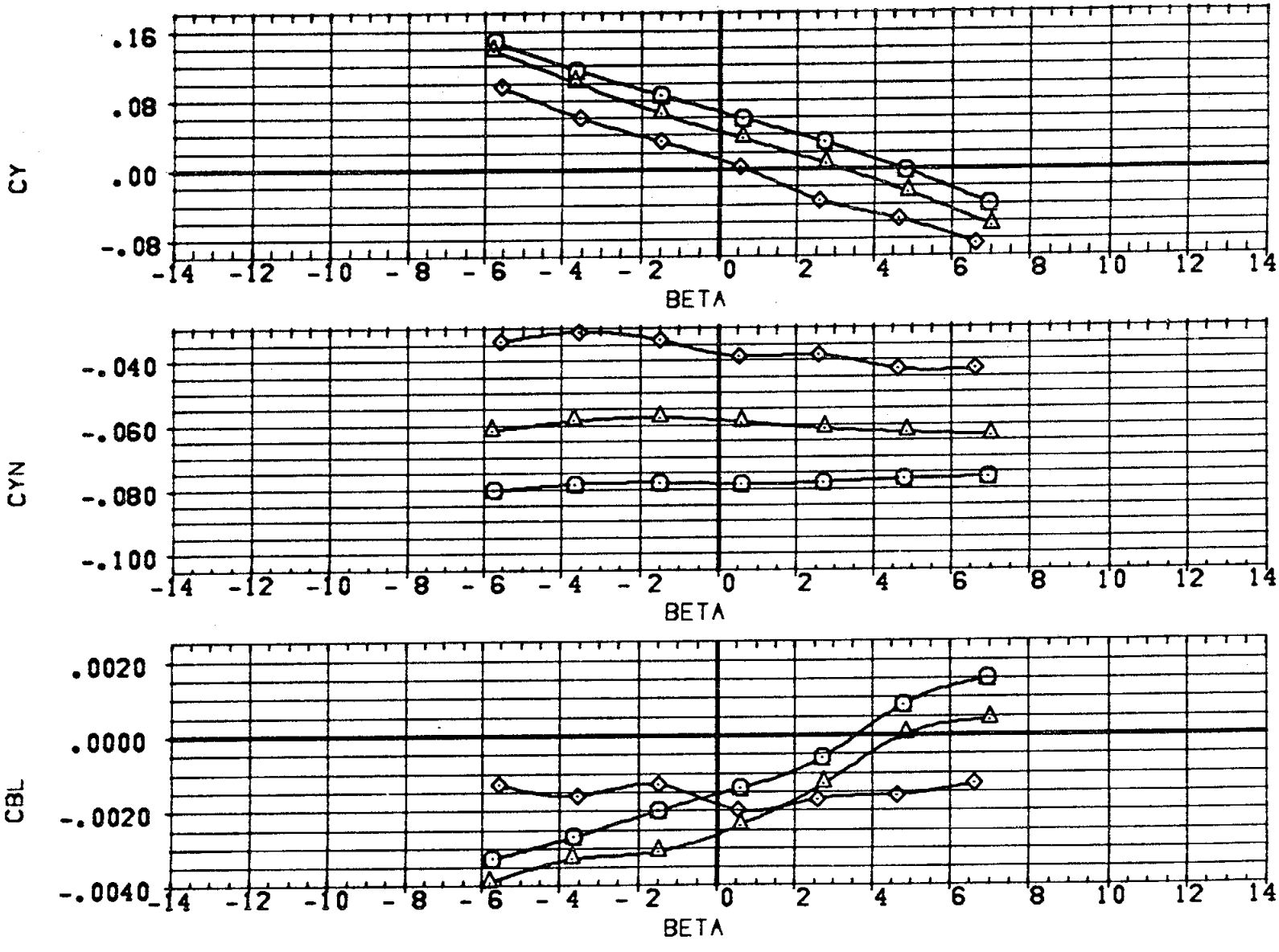
STAB. CHAR. - T3 WITH ONE SRB ATTACHED, IN PRESENCE OF SRB AND 01

MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)A72142)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.462	ALPHA	.000	CONFIG	14.000
△	1.972	RUDDER	.000	AILRON	.000
◇	4.960	ORBINC	.000	DELTAZ	.120
		X-SRB	.000	RUDFLR	10.000
		ELEVTR	.000		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

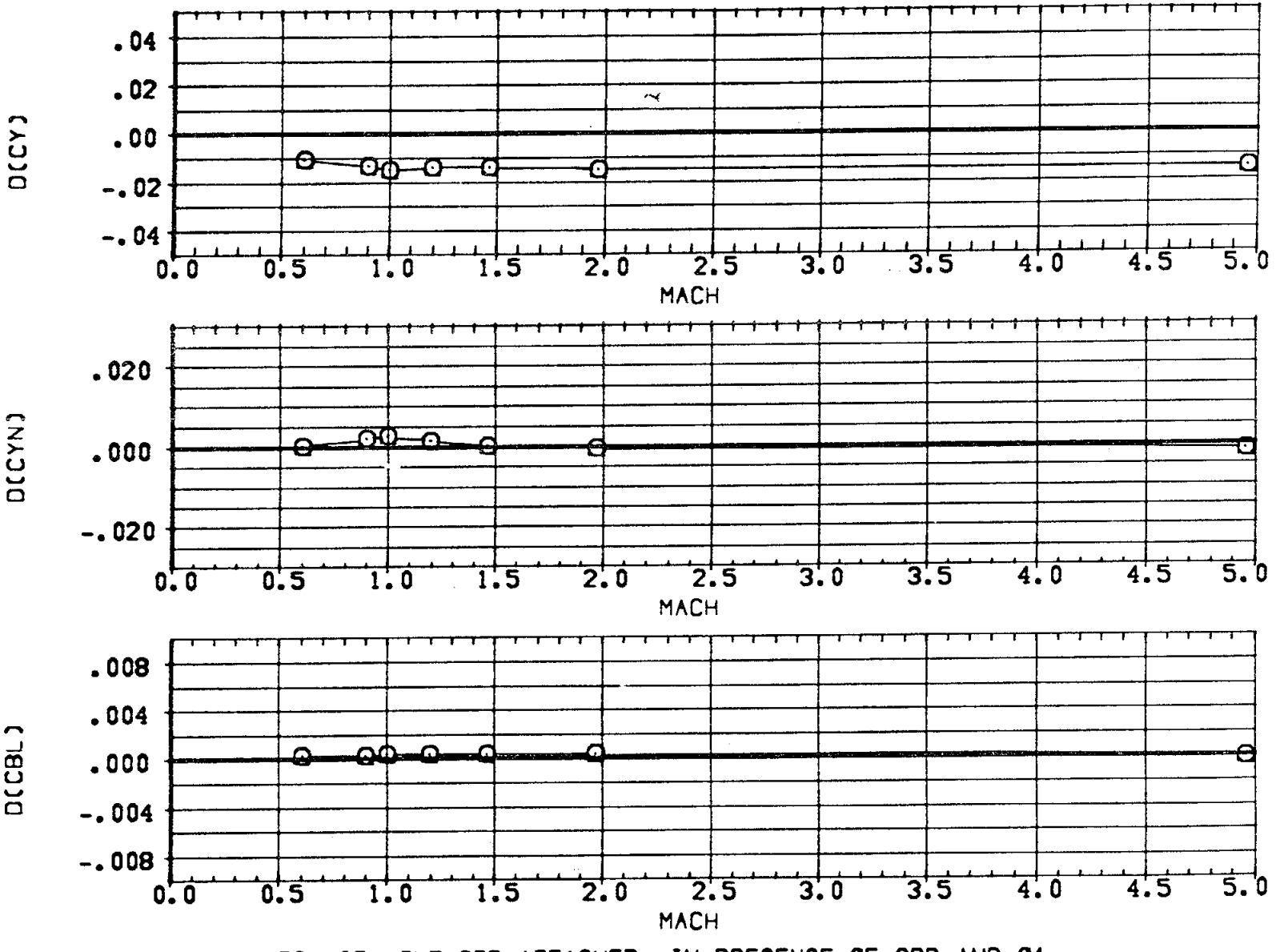


STAB. CHAR. - T3 WITH ONE SRB ATTACHED, IN PRESENCE OF SRB AND 01

MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01IA72142)

PARAMETRIC VALUES			
ALPHA	.000	CONFIG	14.000
RUDDER	.000	AILRON	.000
ORBINC	.000	DELTAZ	.120
X-SRB	.000	RUDFLR	10.000
ELEVTR	.000		

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



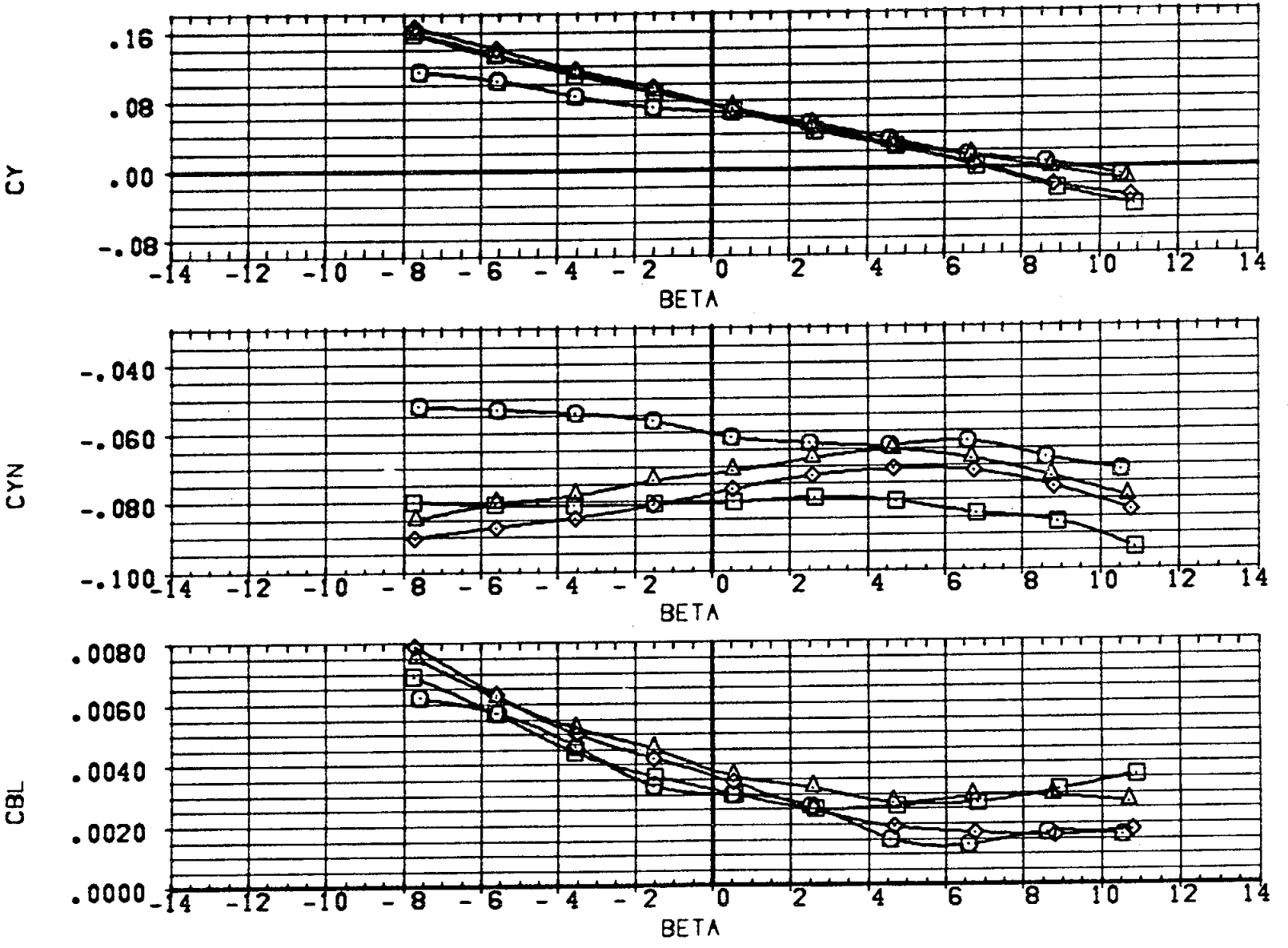
STAB. CHAR. - T3 WITH ONE SRB ATTACHED, IN PRESENCE OF SRB AND 01

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2) (A72144)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.597	ALPHA	.000	CONFIG	16.000
△	.903	X-SRB	.000		
◇	.997				
□	1.197				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



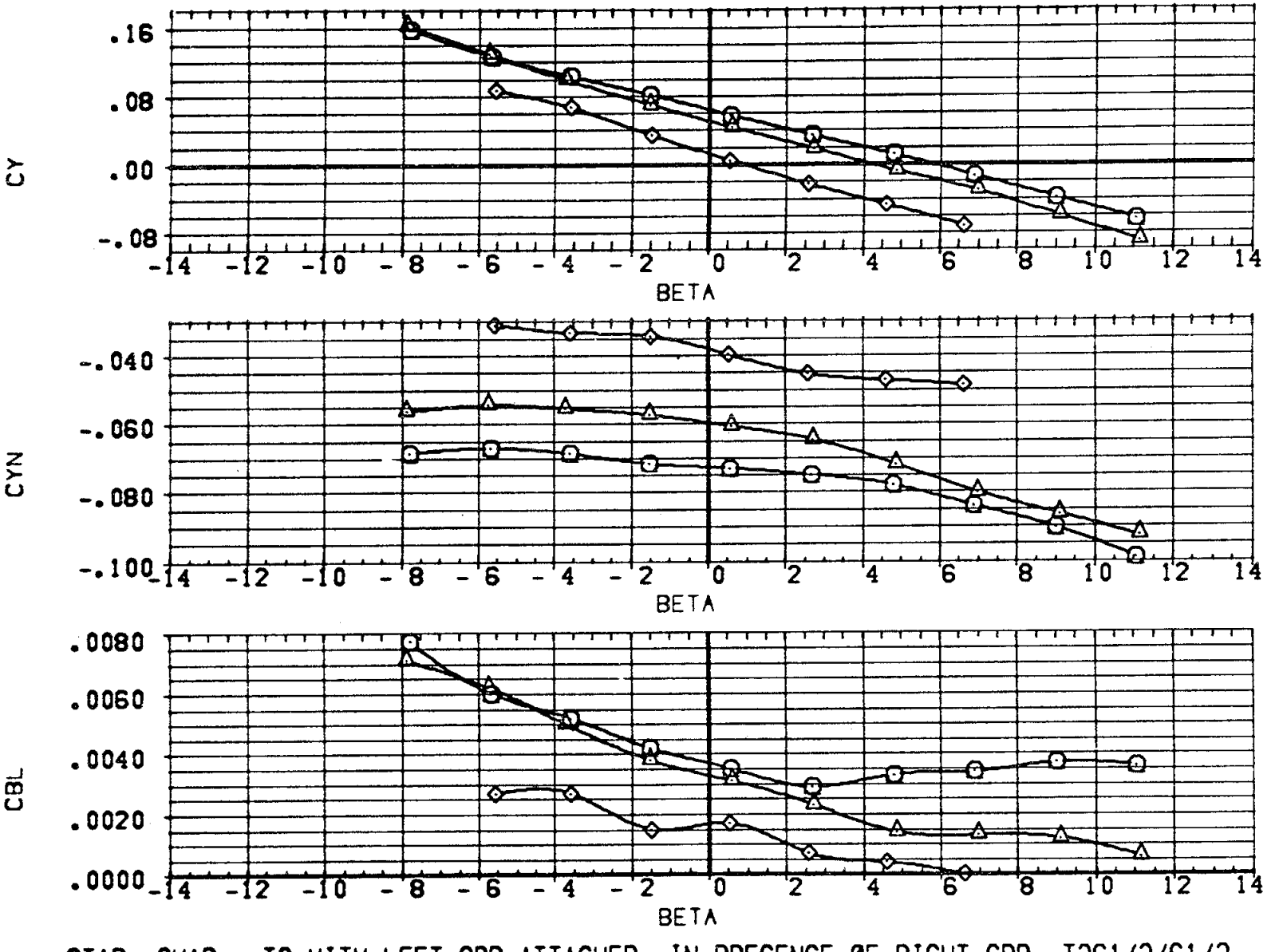
STAB. CHAR - T3 WITH LEFT SRB ATTACHED, IN PRESENCE OF RIGHT SRB, T3S1/2/S1/2

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2) (A72144)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.460	ALPHA	.000	CONFIG	16.000
△	1.970	X-SRB	.000		
◇	4.960				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STAB. CHAR - T3 WITH LEFT SRB ATTACHED, IN PRESENCE OF RIGHT SRB, T3S1/2/S1/2

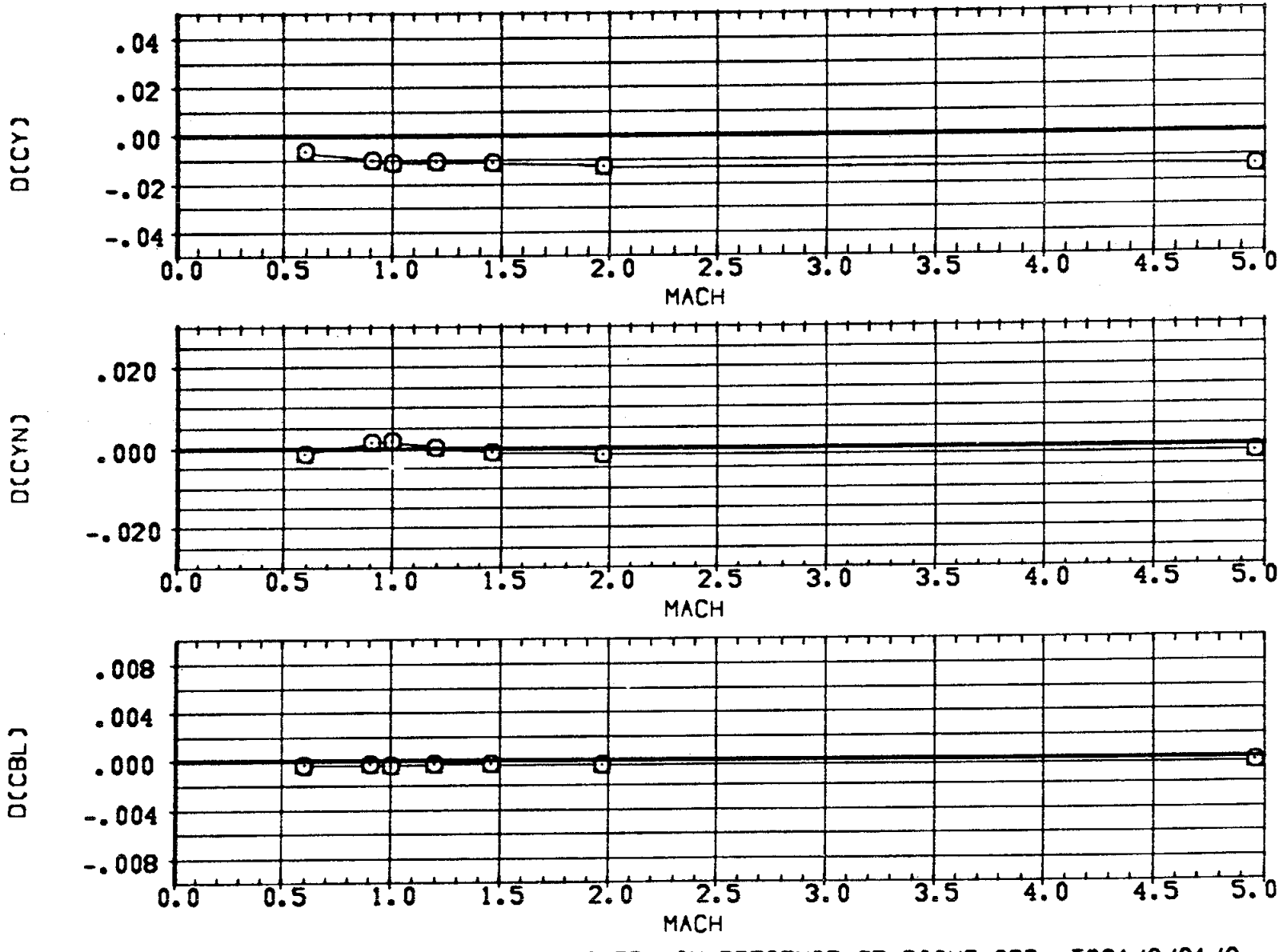
MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2) (A72144)

PARAMETRIC VALUES

ALPHA	.000	CONFIG	16.000
X-SRB	.000		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STAB. CHAR - T3 WITH LEFT SRB ATTACHED, IN PRESENCE OF RIGHT SRB, T3S1/2/S1/2

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2) (A72145)

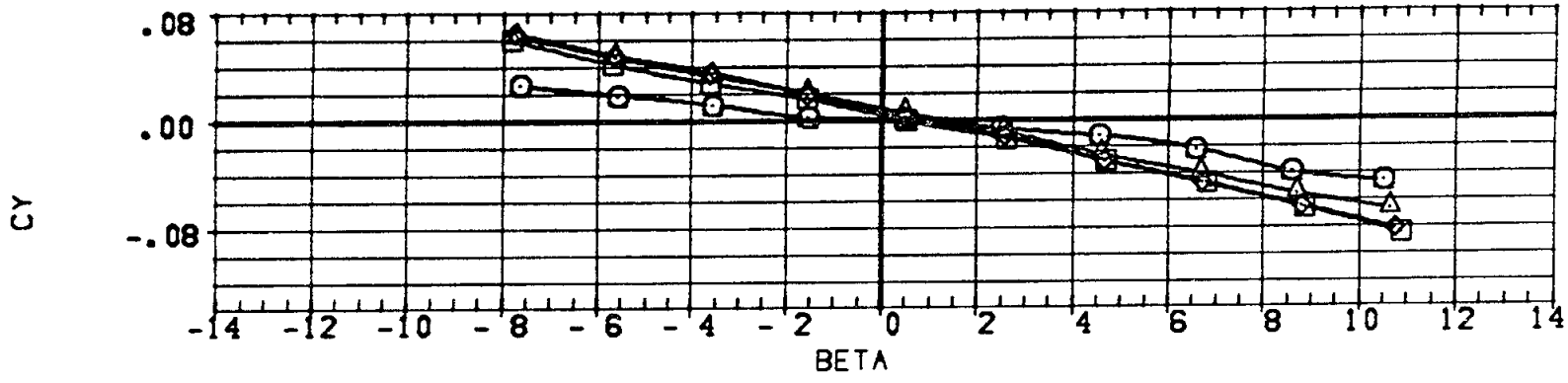
SYMBOL	MACH
○	.598
△	.898
◇	.991
□	1.191

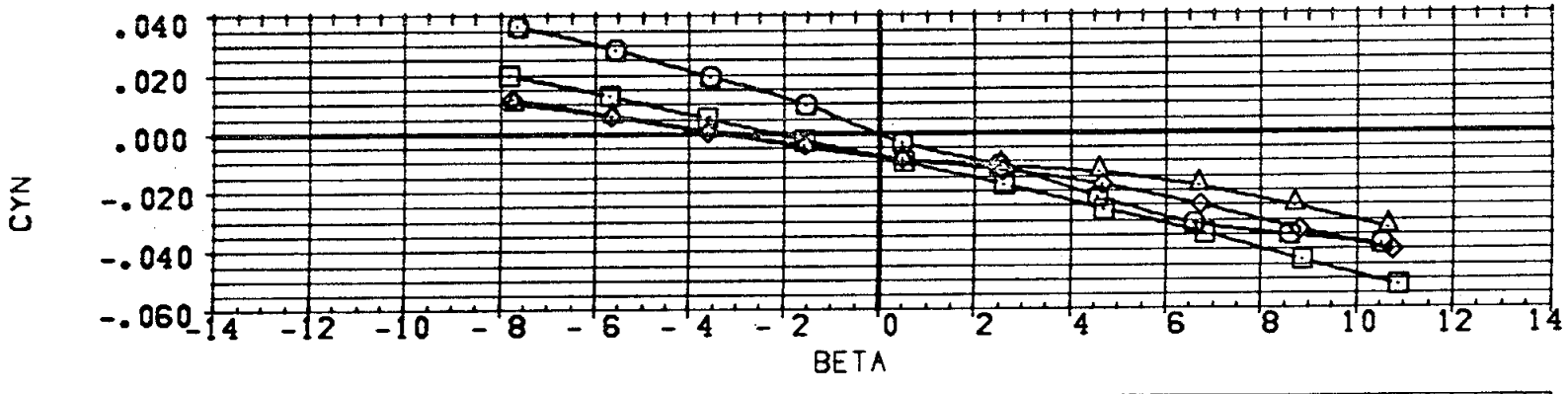
PARAMETRIC VALUES

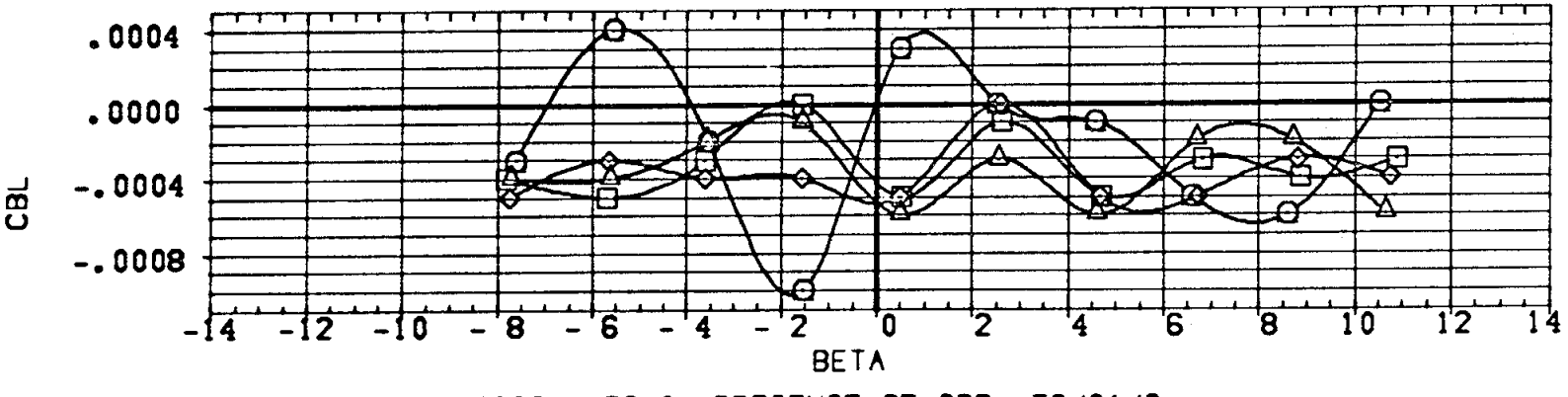
ALPHA	.000	CONFIG	17.000	
X-SRB	.000			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







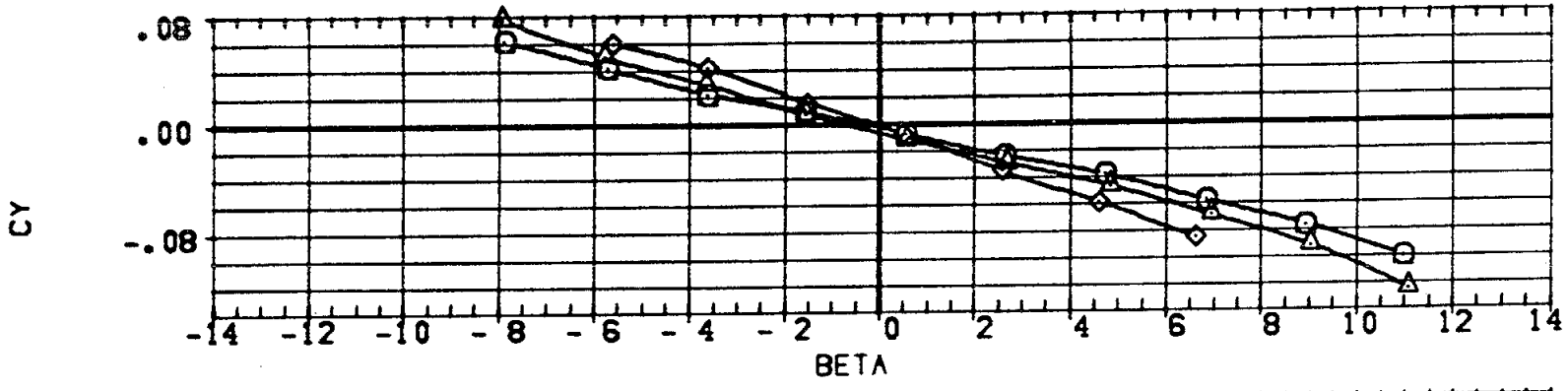
STABILITY CHARACTERISTICS - T3 IN PRESENCE OF SRB, T3/S1/2

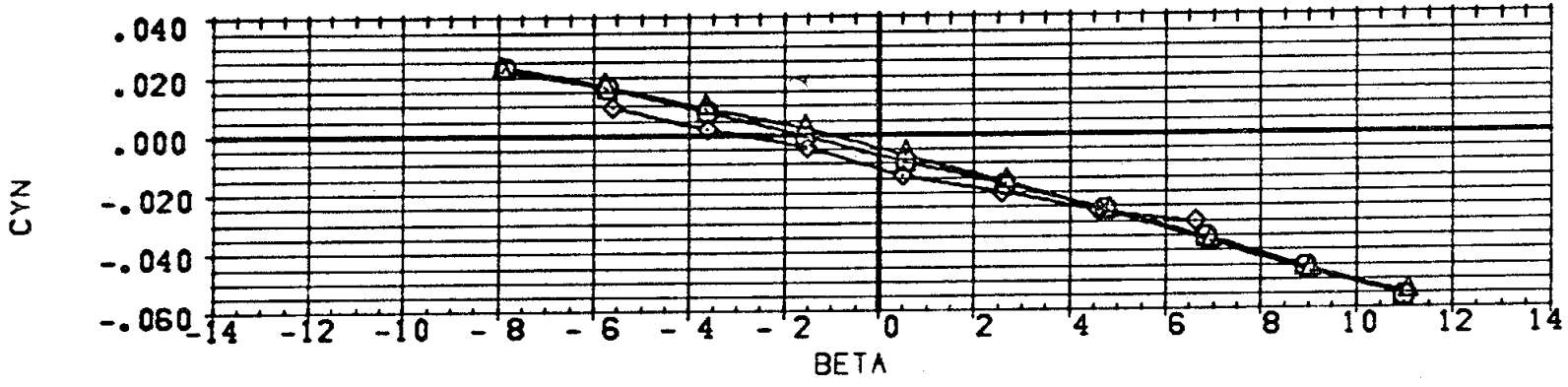
MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2) (A72145)

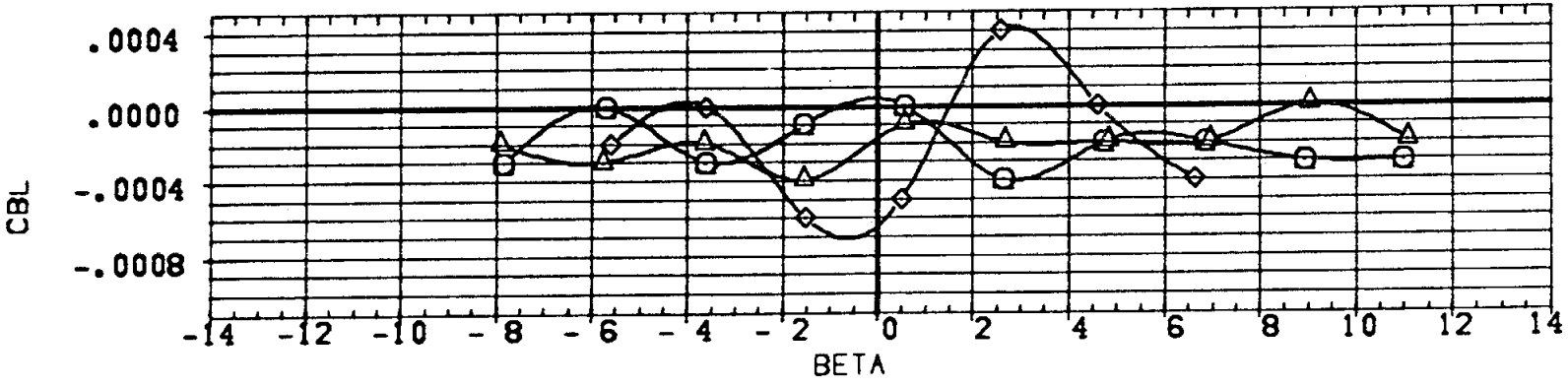
SYMBOL	MACH		PARAMETRIC VALUES		
○	1.462	ALPHA	.000	CONFIG	17.000
△	1.963	X-SRB	.000		
◇	4.960				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - T3 IN PRESENCE OF SRB, T3/S1/2

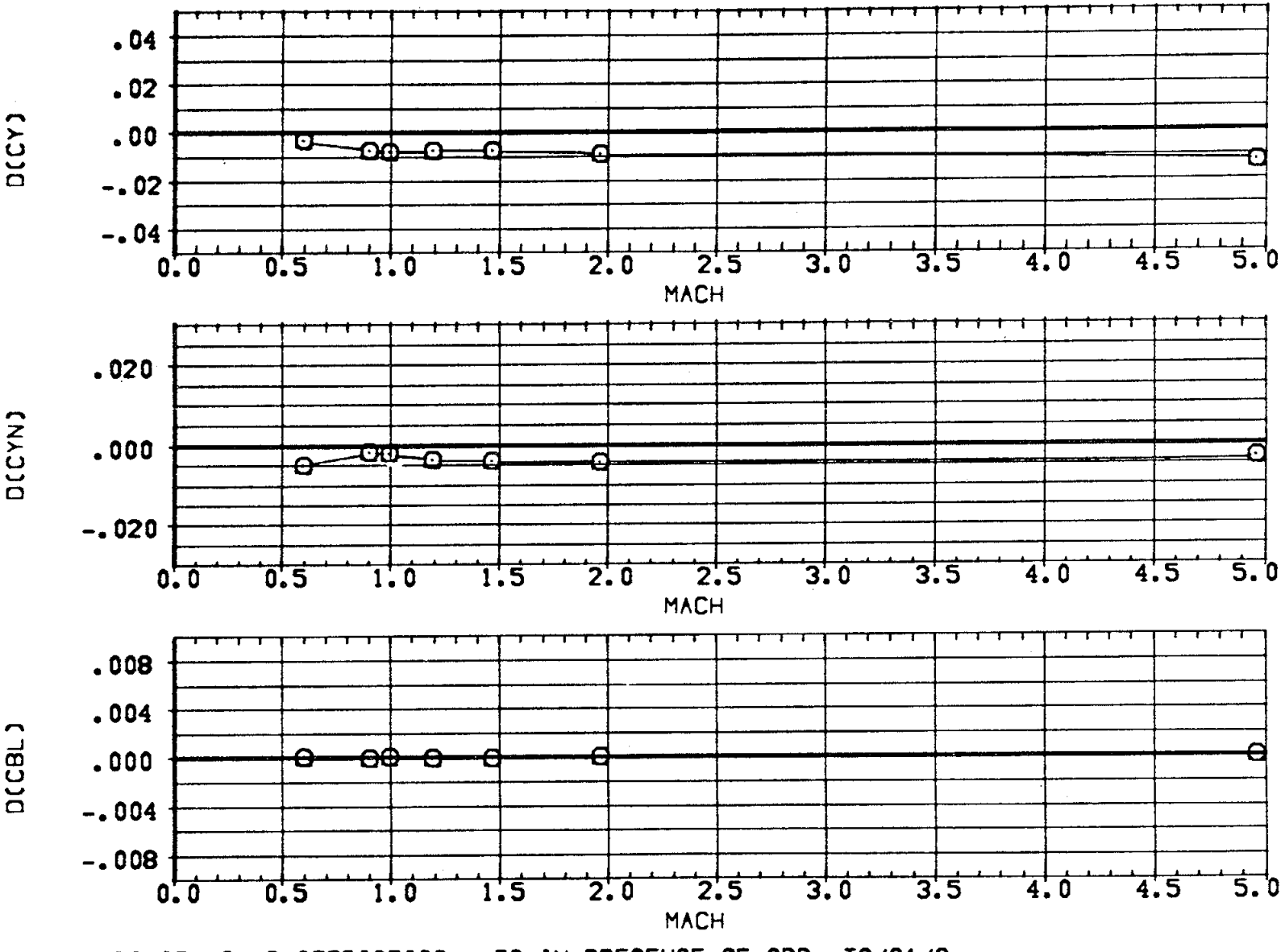
MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2) (A72145)

PARAMETRIC VALUES

ALPHA	.000	CONFIG	17.000
X-SRB	.000		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - T3 IN PRESENCE OF SRB, T3/S1/2

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (A72801)

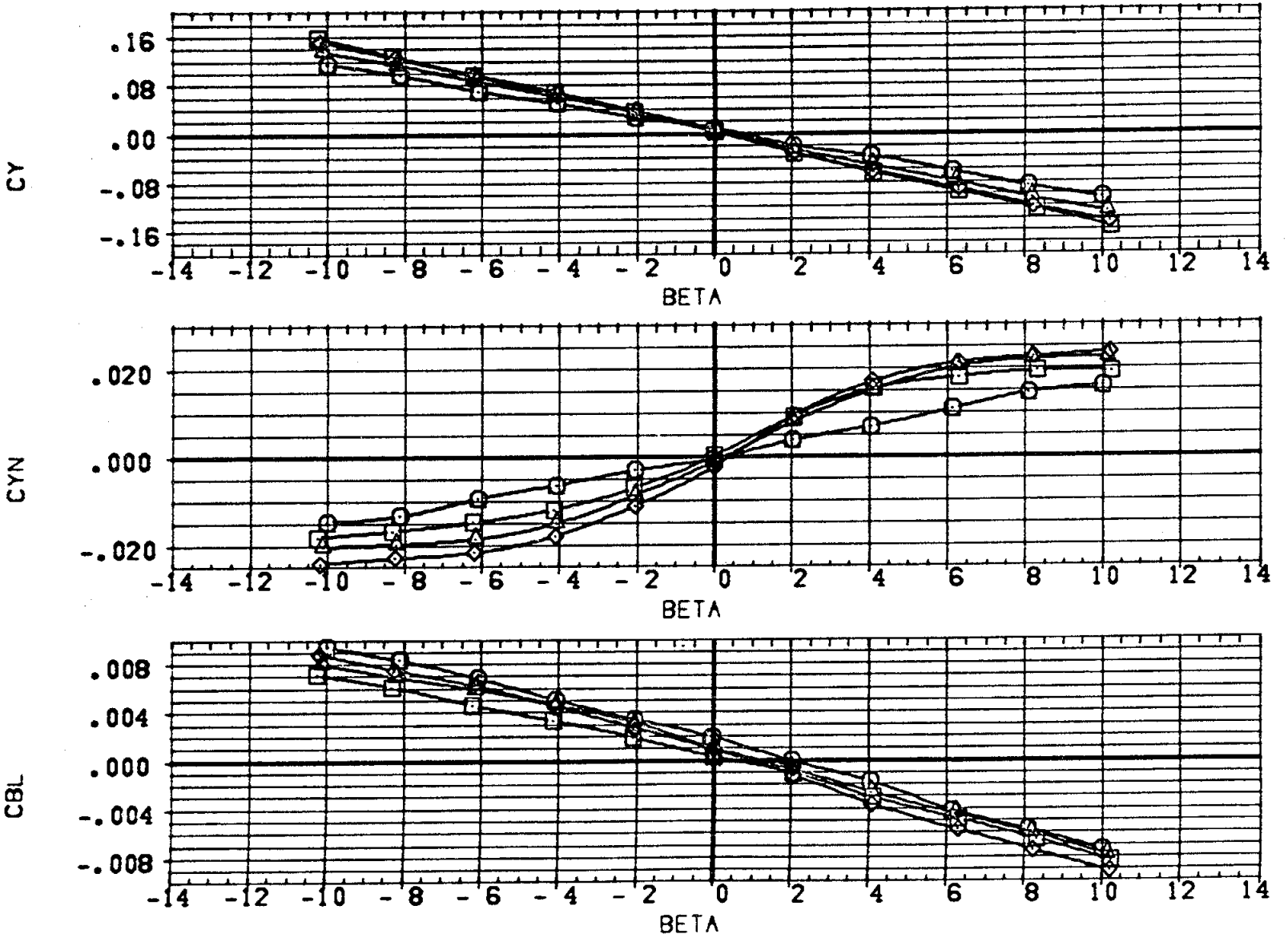
SYMBOL	MACH
○	.600
△	.903
◇	1.001
□	1.199

PARAMETRIC VALUES

ALPHA	.000	CONFIG	18.000		
X-SRB	.000				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



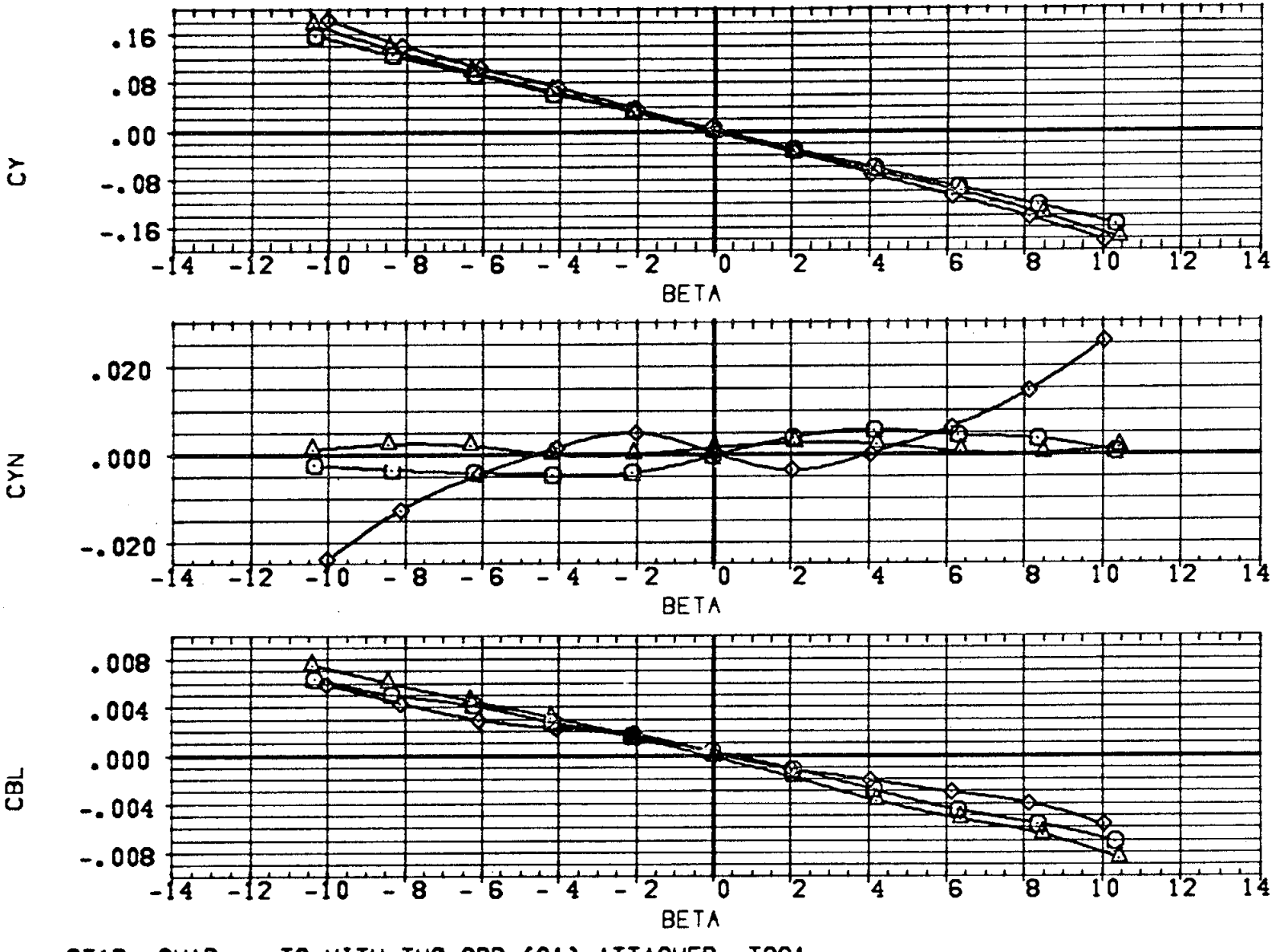
STAB. CHAR. - T3 WITH TWO SRB (S1) ATTACHED, T3S1

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (A72801)

SYMBOL	MACH	PARAMETRIC VALUES			
○	1.463	ALPHA	.000	CONFIG	10.000
△	1.960	X-SRB	.000		
◇	4.959				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STAB. CHAR. - T3 WITH TWO SRB (S1) ATTACHED, T3S1

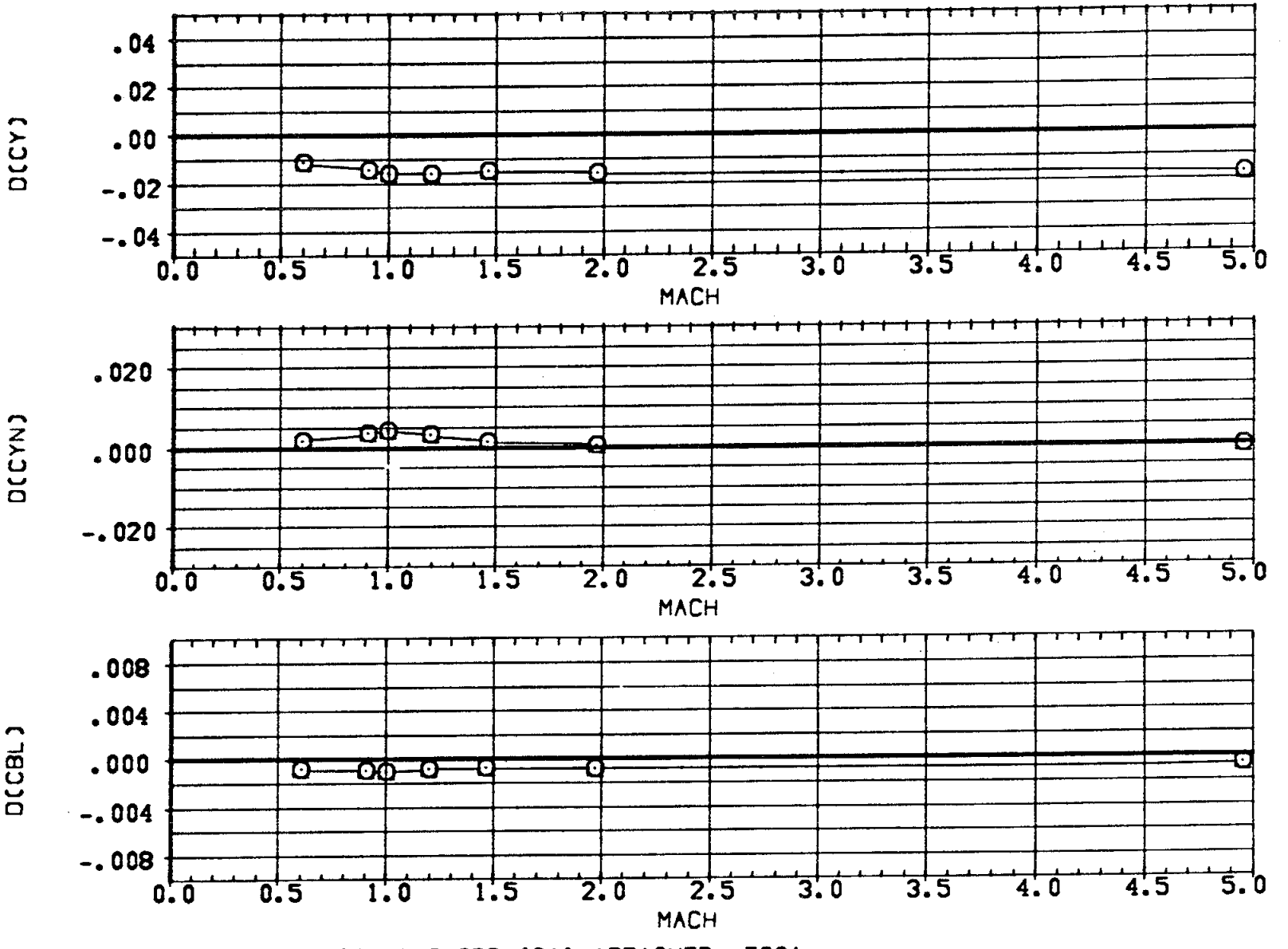
MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (A72801)

PARAMETRIC VALUES

ALPHA	.000	CONFIG	18.000
X-SRB	.000		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



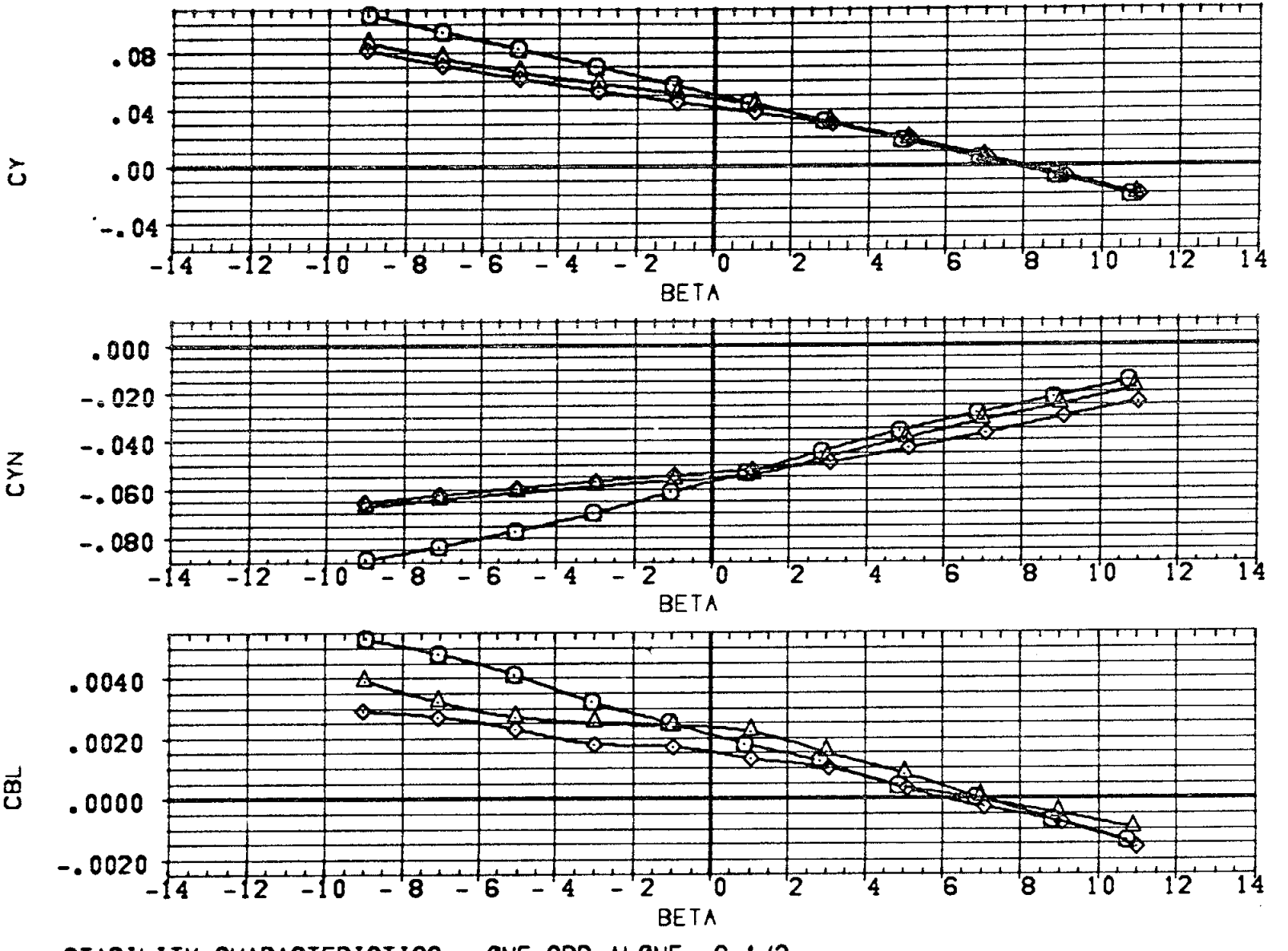
STAB. CHAR. - T3 WITH TWO SRB (S1) ATTACHED, T3S1

MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (A72202)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.601	ALPHA	.000	CONFIG	19.000
△	.897				
◇	.997				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



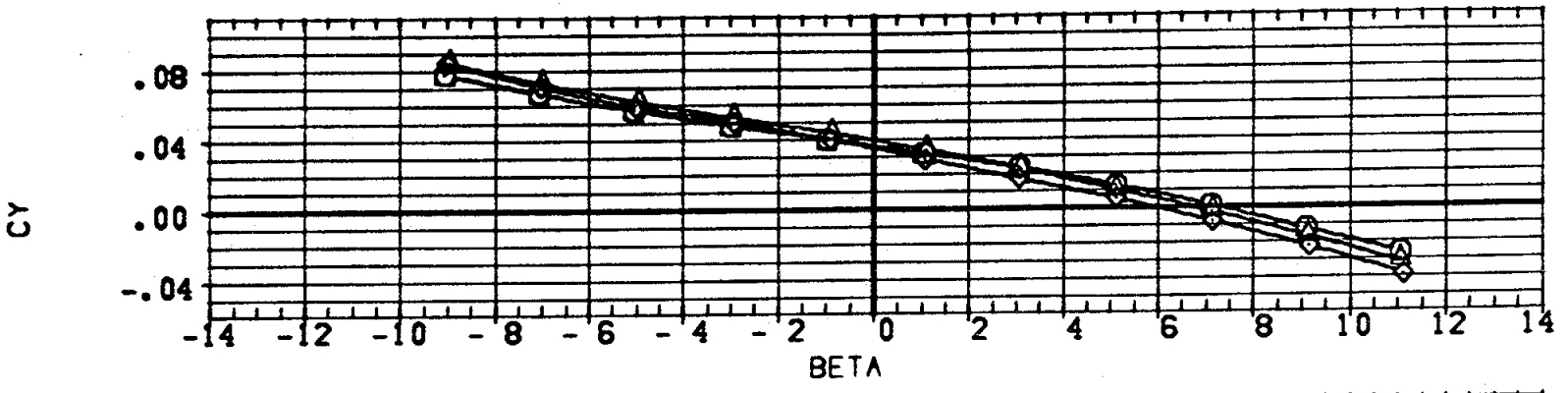
STABILITY CHARACTERISTICS - ONE SRB ALONE, S 1/2

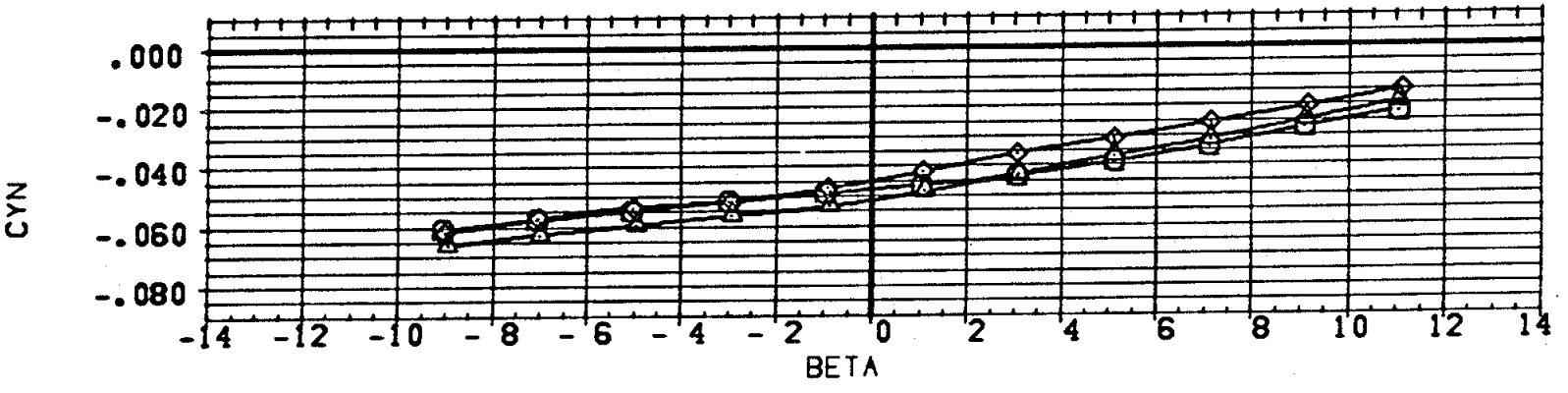
MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (A72202)

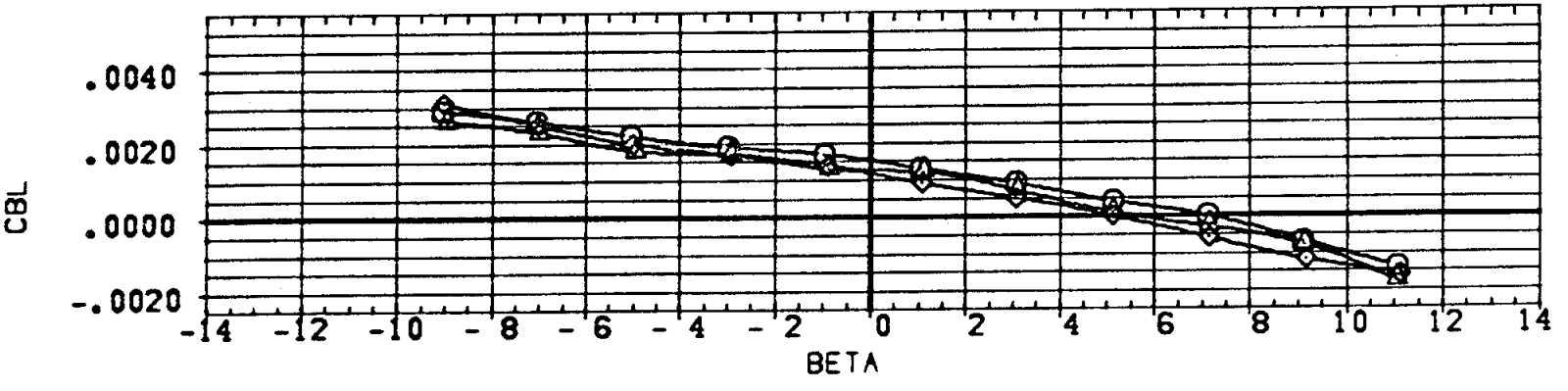
SYMBOL	MACH		PARAMETRIC VALUES		
○	1.197	ALPHA	.000	CONFIG	19.000
△	1.467				
◇	1.955				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







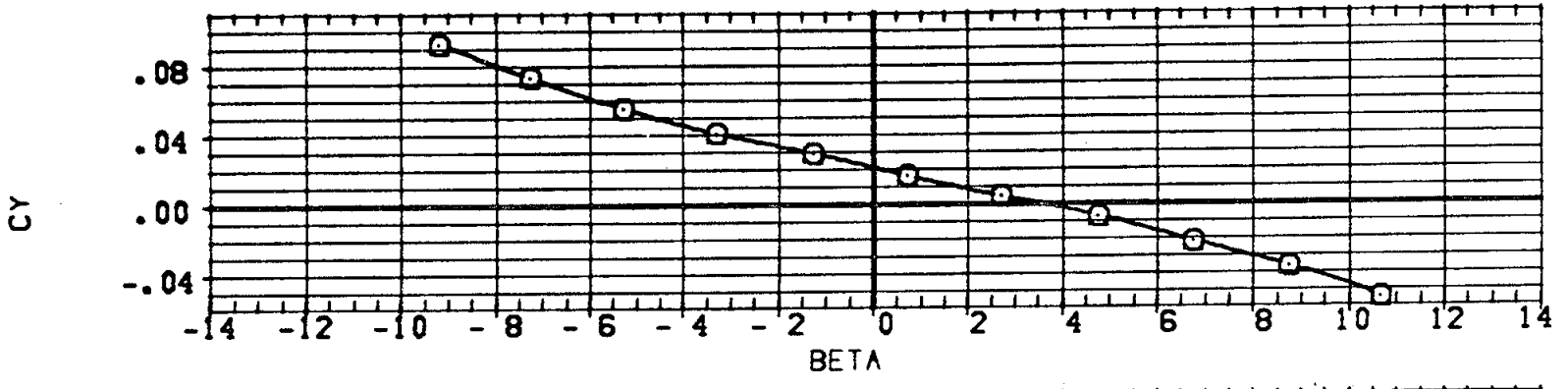
STABILITY CHARACTERISTICS - ONE SRB ALONE, S 1/2

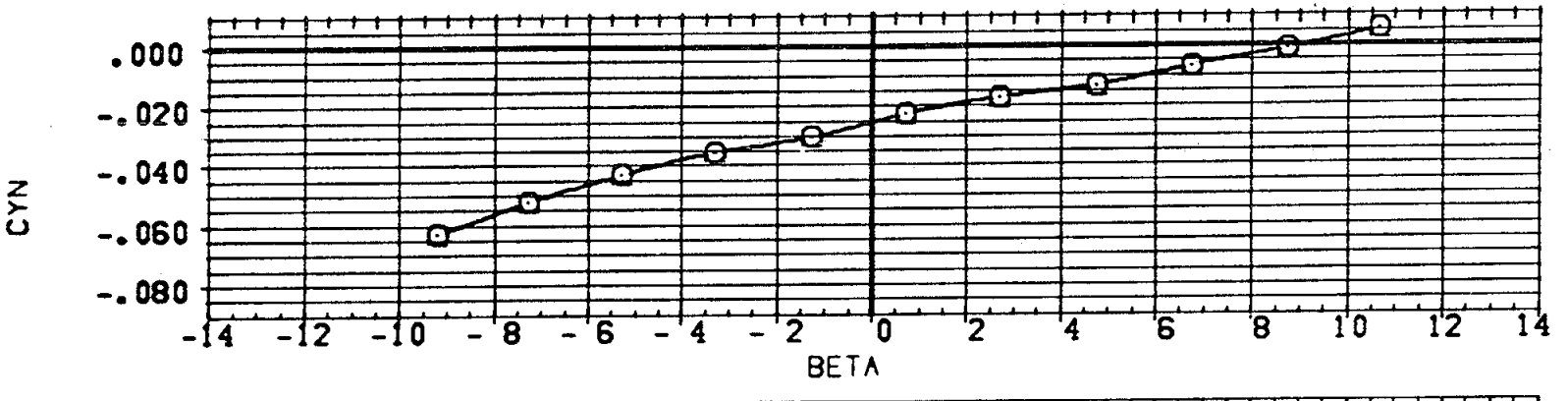
MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (A72202)

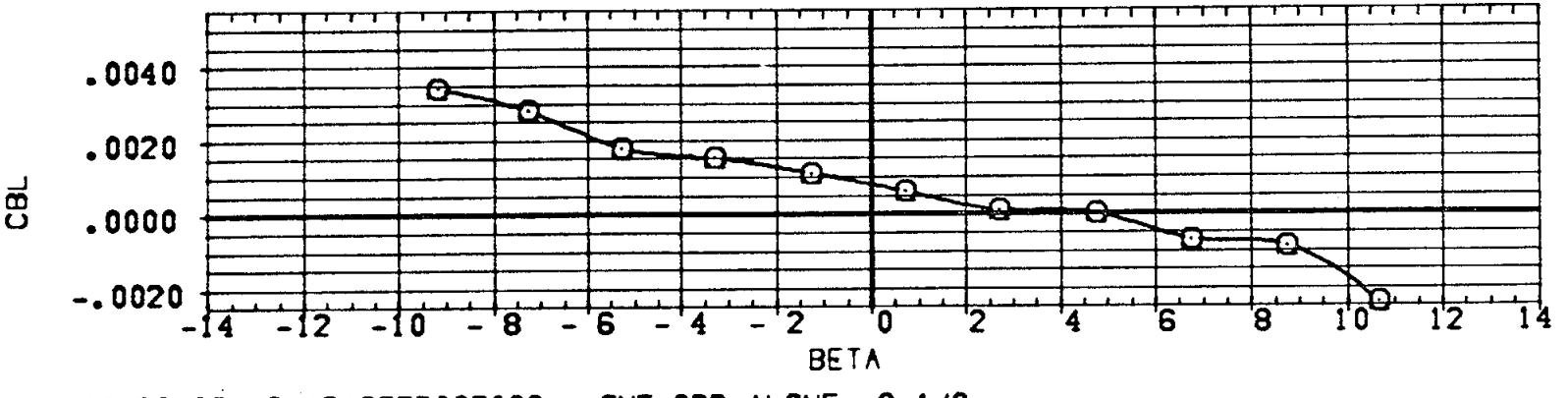
SYMBOL	MACH		PARAMETRIC VALUES		
O	4.959	ALPHA	.000	CONFIG	19.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - ONE SRB ALONE, S 1/2

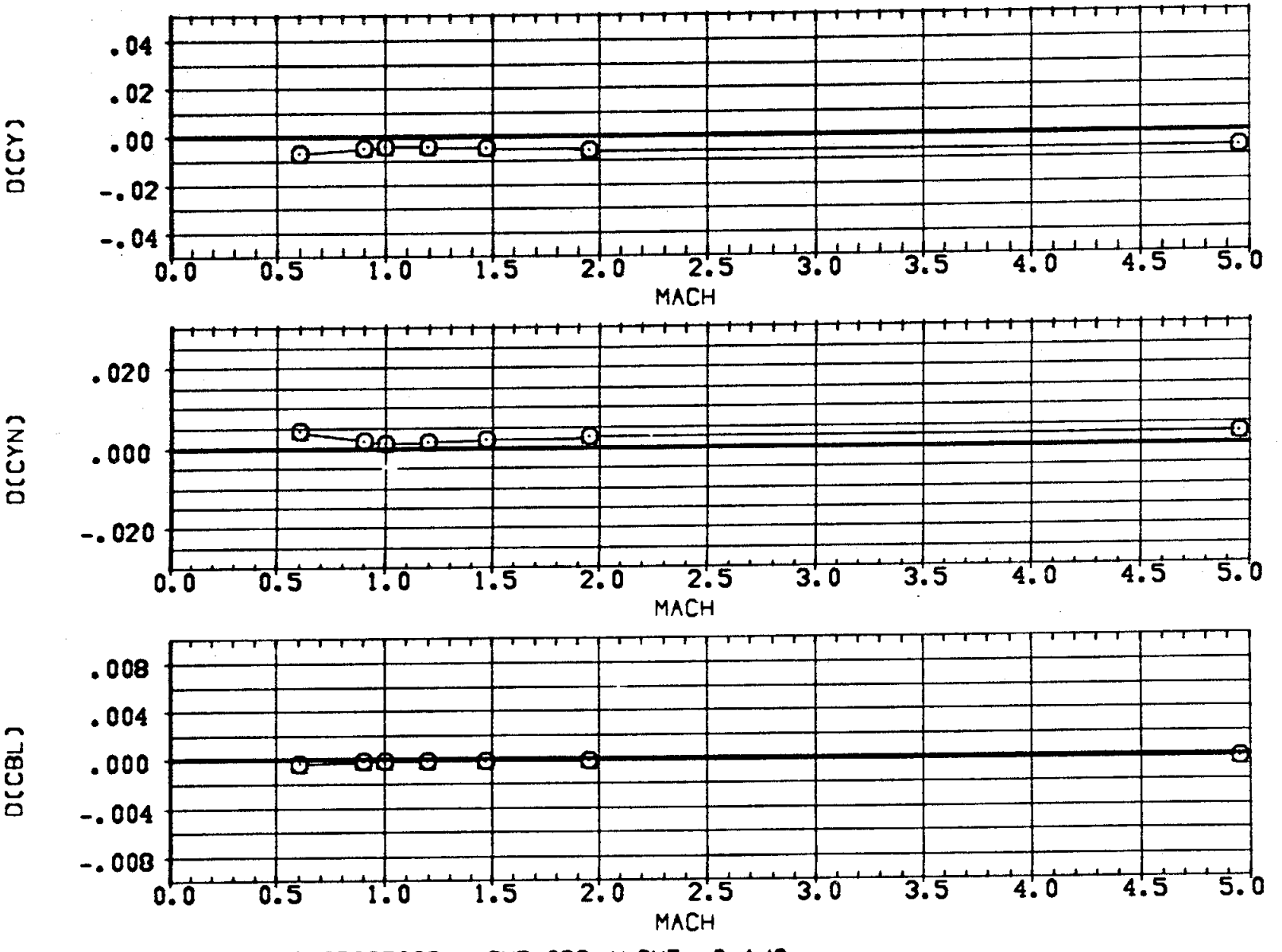
MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (A72202)

PARAMETRIC VALUES

ALPHA .000 CONFIG 19.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - ONE SRB ALONE, S 1/2

MSFC 545 (IA1) NAR ATP BL LV-(T3) (A72602)

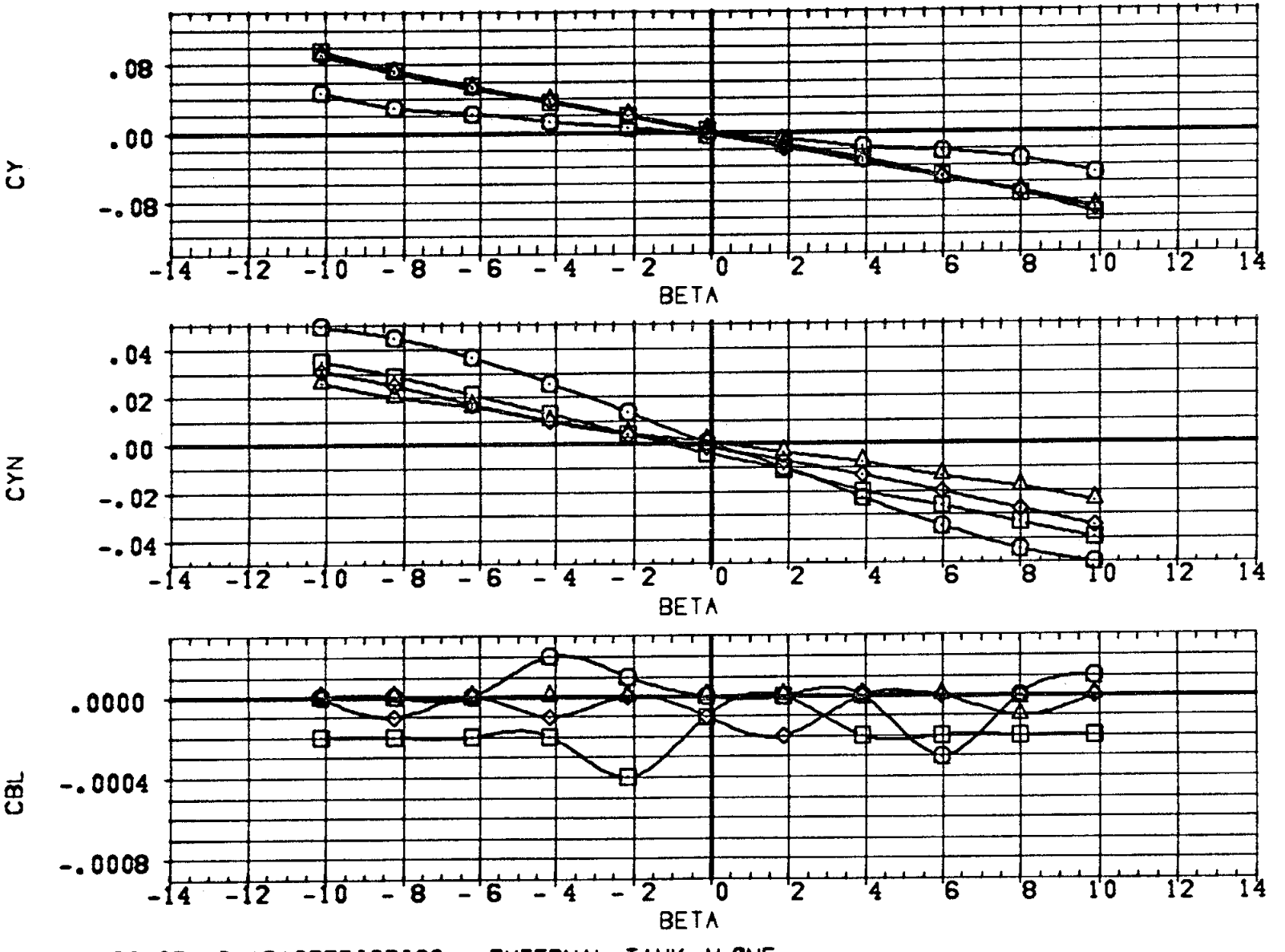
SYMBOL	MACH
○	.598
△	.902
◇	.999
□	1.200

PARAMETRIC VALUES

ALPHA .000 CONFIG 20.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EXTERNAL TANK ALONE

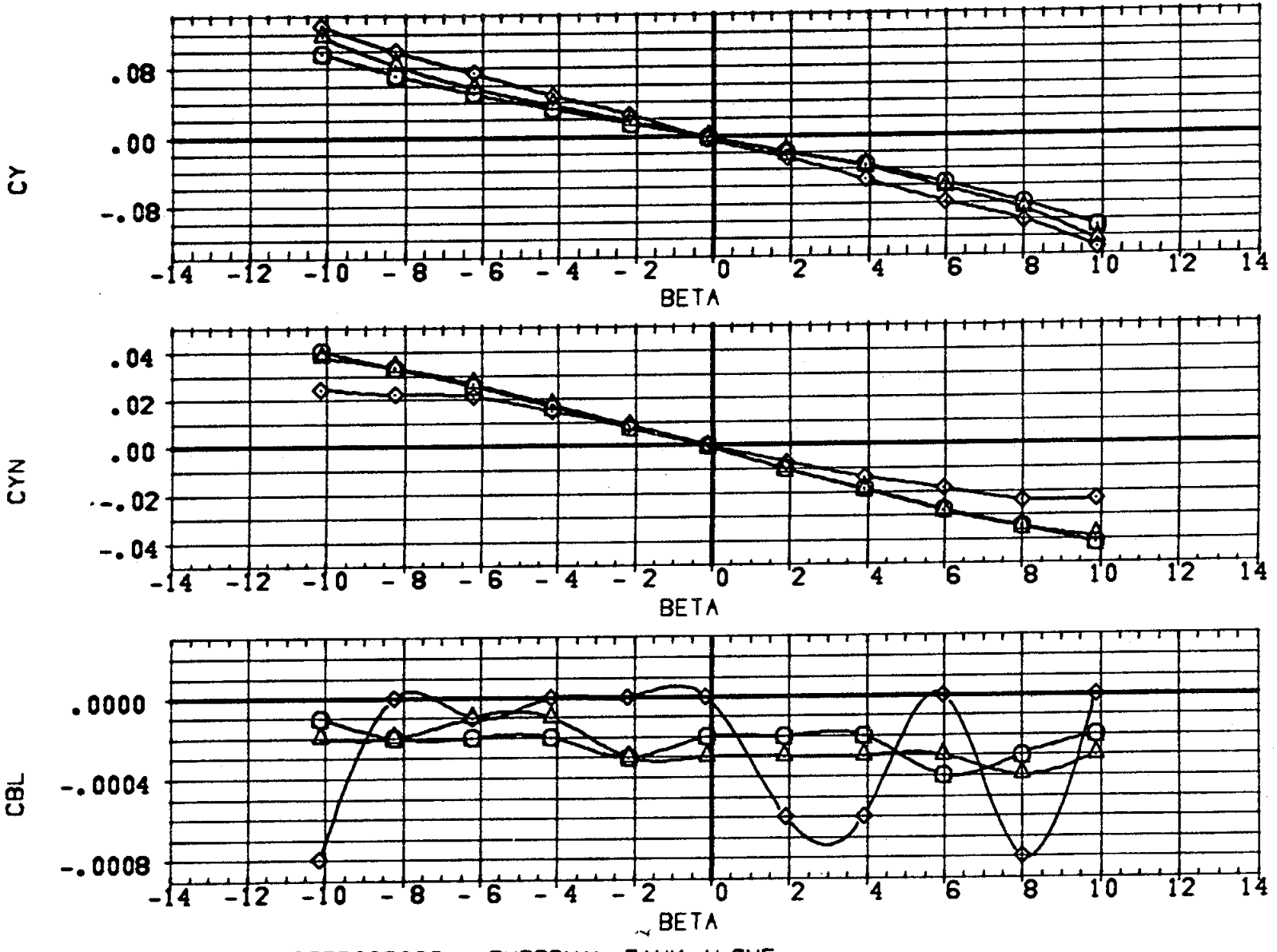
MSFC 545 (IA1) NAR ATP BL LV-(T3)

(A72602)

SYMBOL	MACH	PARAMETRIC VALUES			
○	1.462	ALPHA	.000	CONFIG	20.000
△	1.960				
◇	4.959				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EXTERNAL TANK ALONE

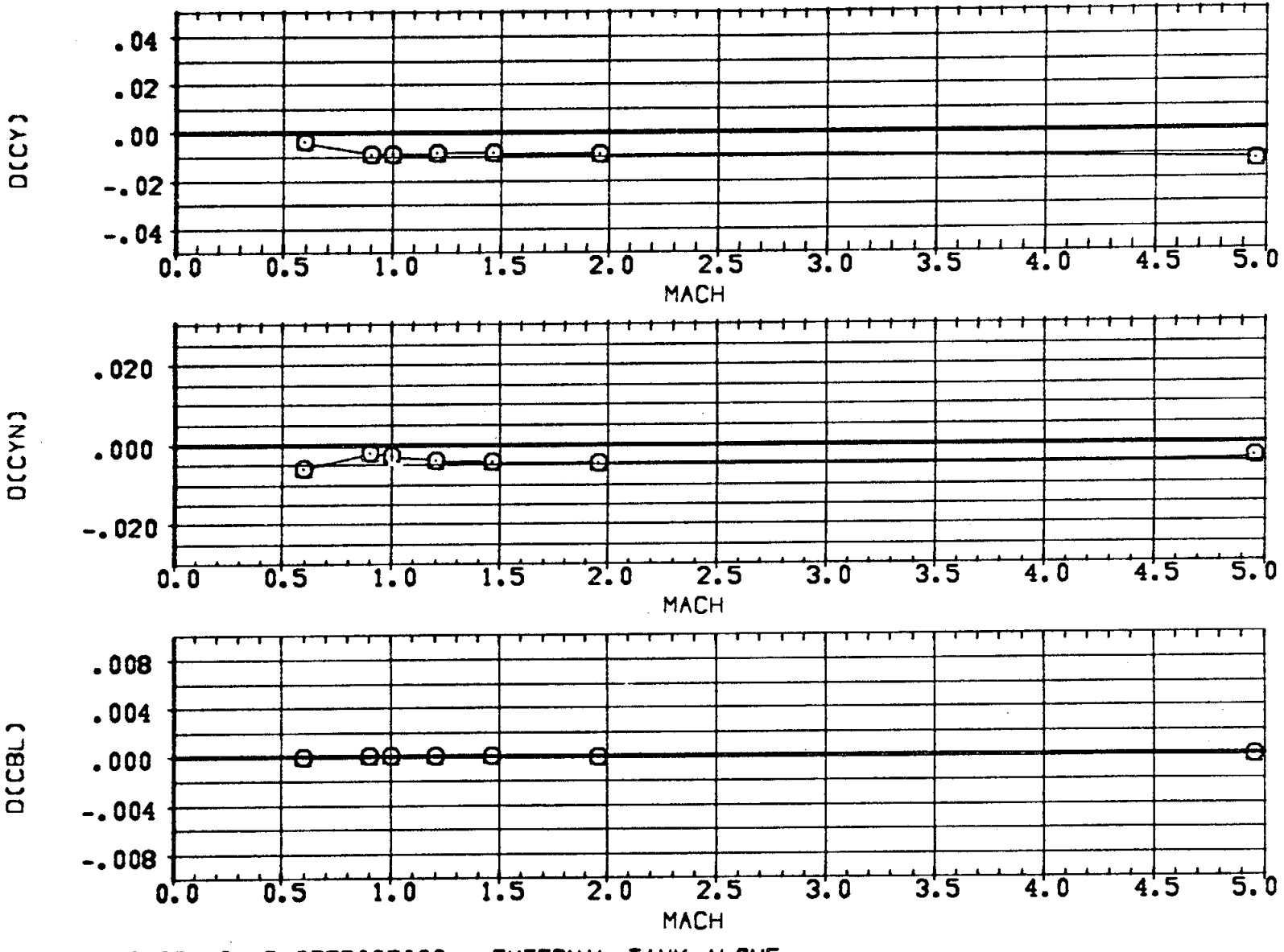
MSFC 545 (IA1) NAR ATP BL LV-(T3) (A72602)

PARAMETRIC VALUES

ALPHA .000 CONFIG 20.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

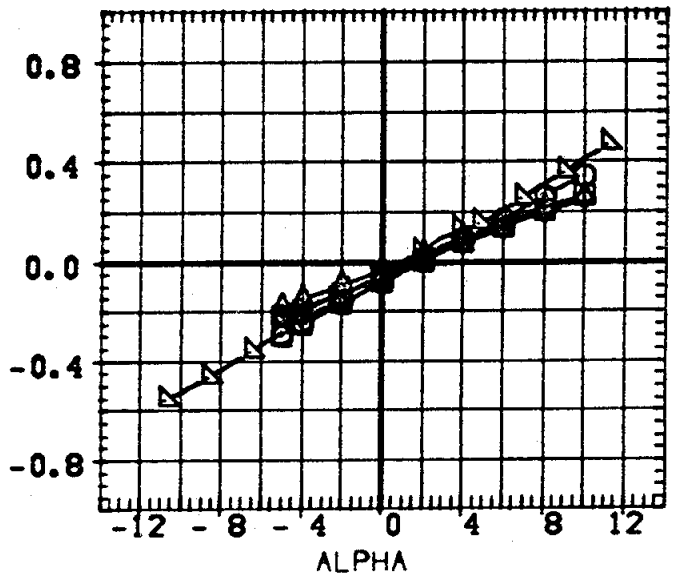


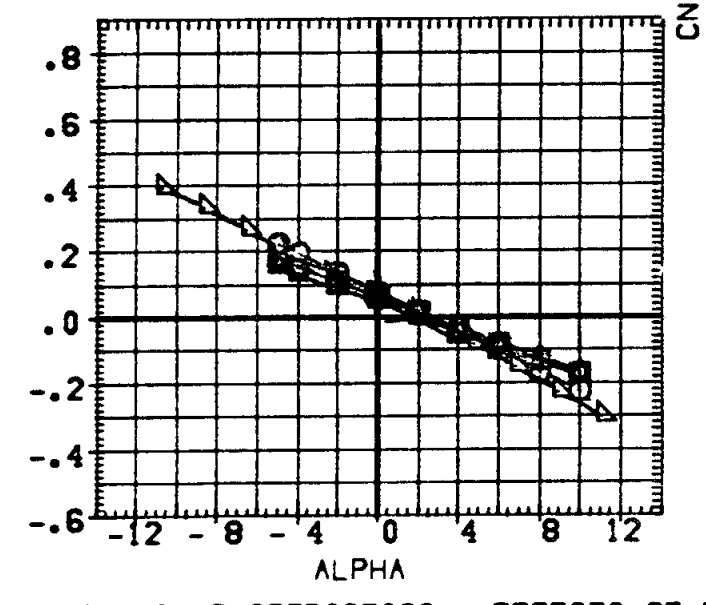
STABILITY CHARACTERISTICS - EXTERNAL TANK ALONE

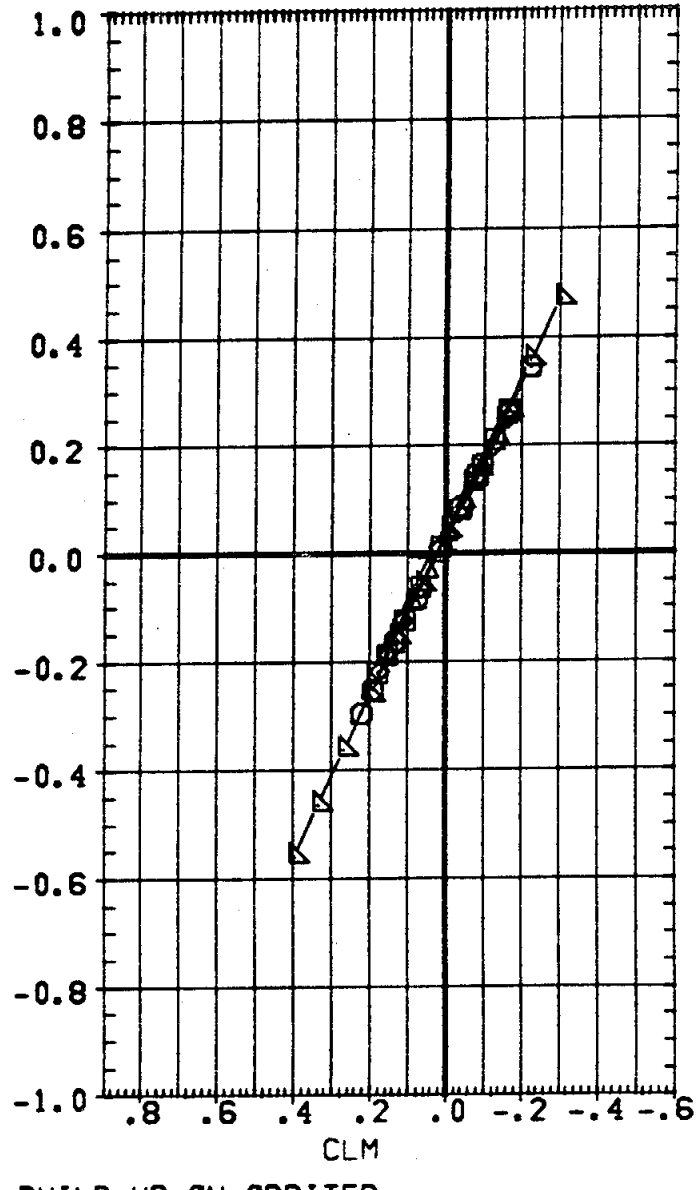
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AY2001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AY2006)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(AY2036)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(AY2015)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(AY2501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
.000	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







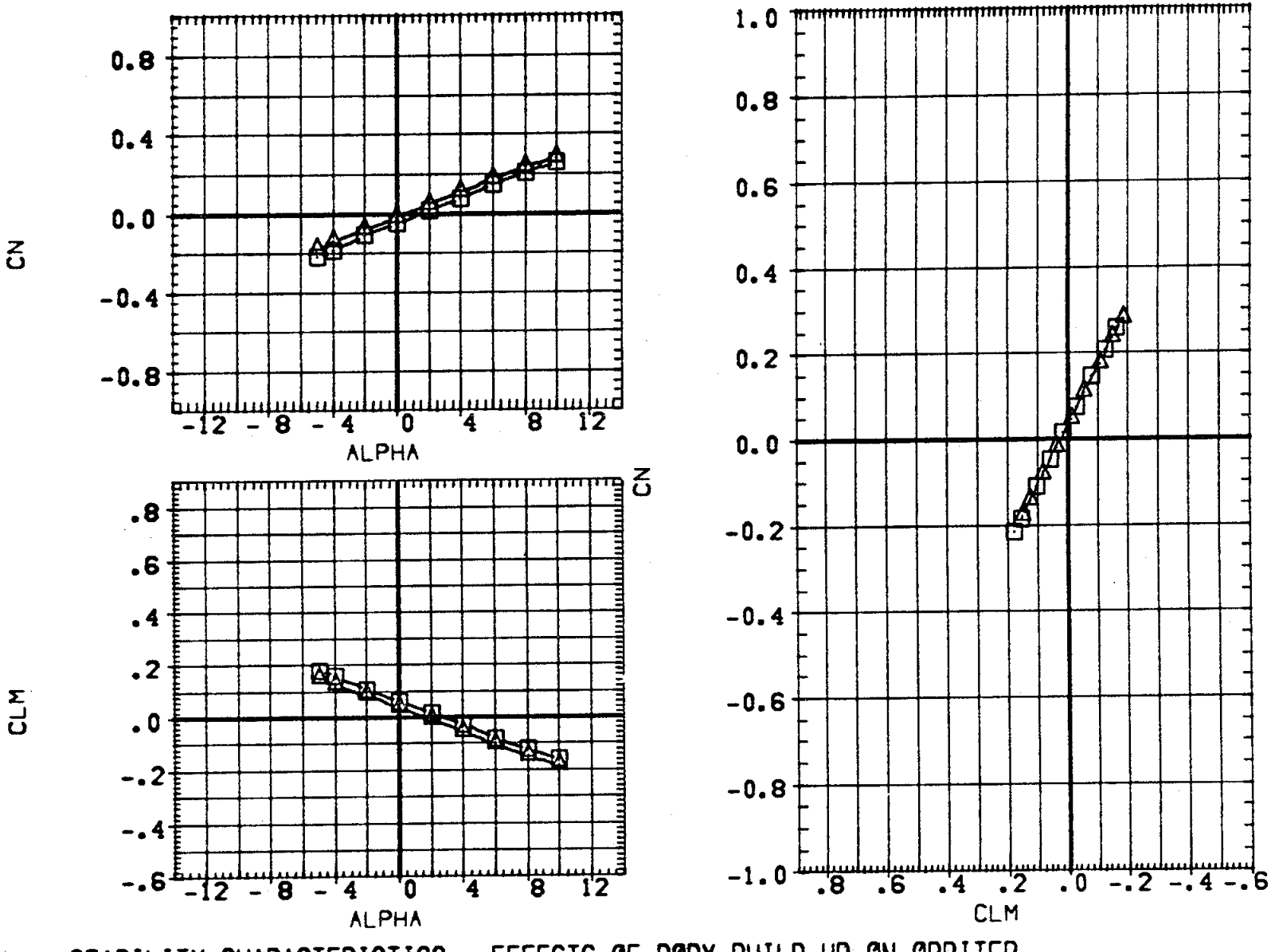
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)		DATA NOT AVAILABLE
(A72008)		HSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1)
(A72036)		DATA NOT AVAILABLE
(A72015)		HSFC 545 (IA1) MOD ATP LV-(01)/(T3)/(S1)
(A72501)		DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
.000	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

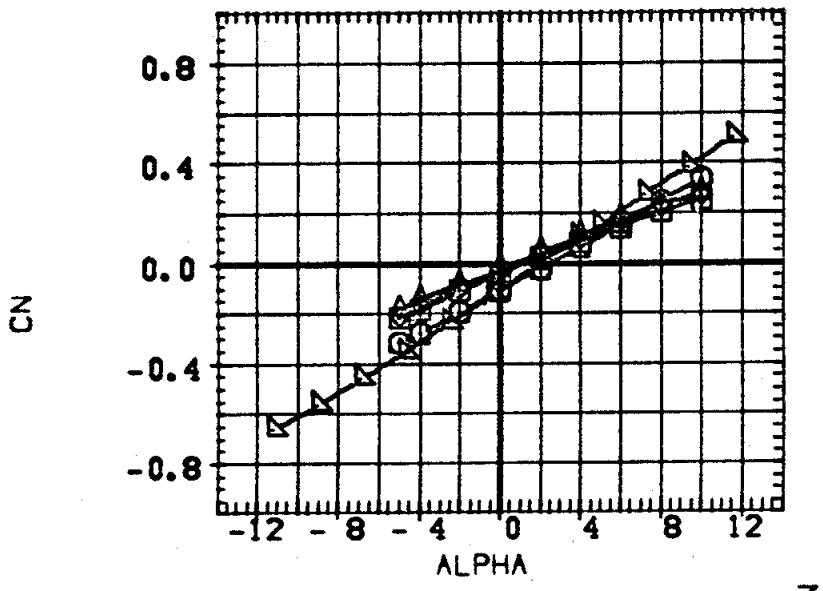
(B)MACH = .80

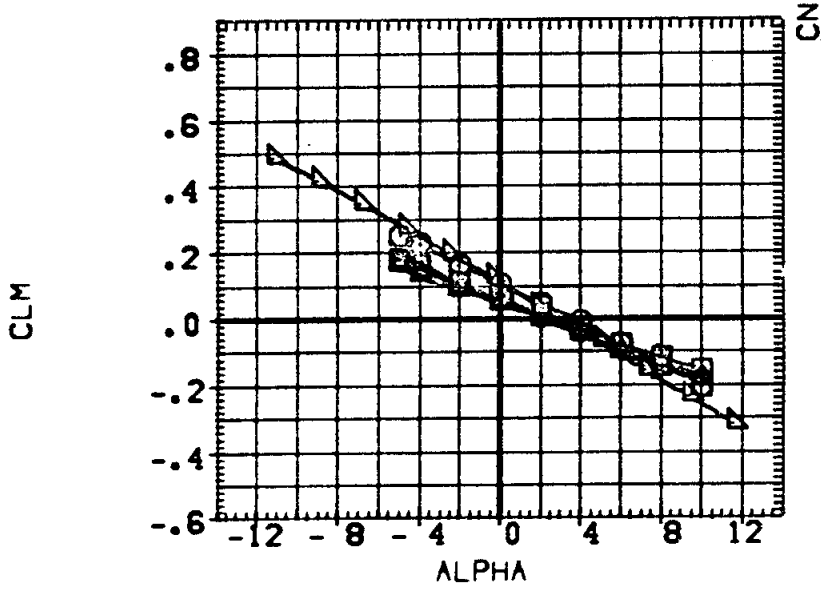
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)
(A72006)	△	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72036)	◇	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(A72015)	□	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	▽	MSFC S4S (IA1) NAR ATP BL ORBITER-(O1)

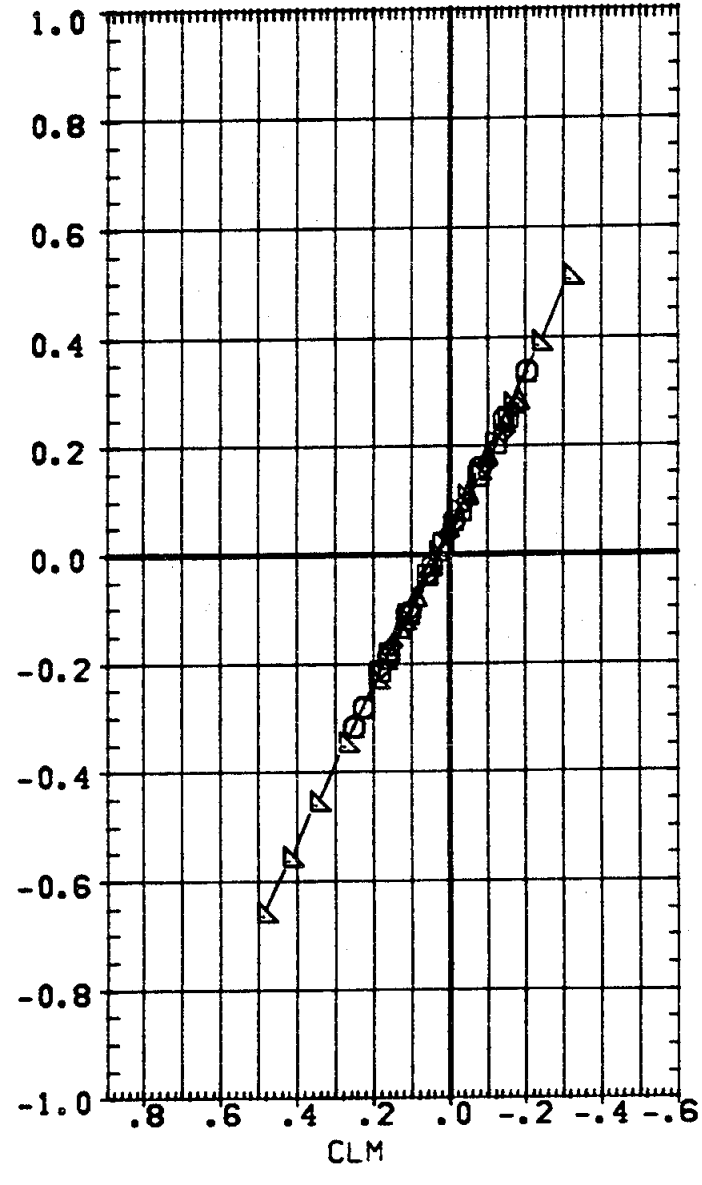
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
.000	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







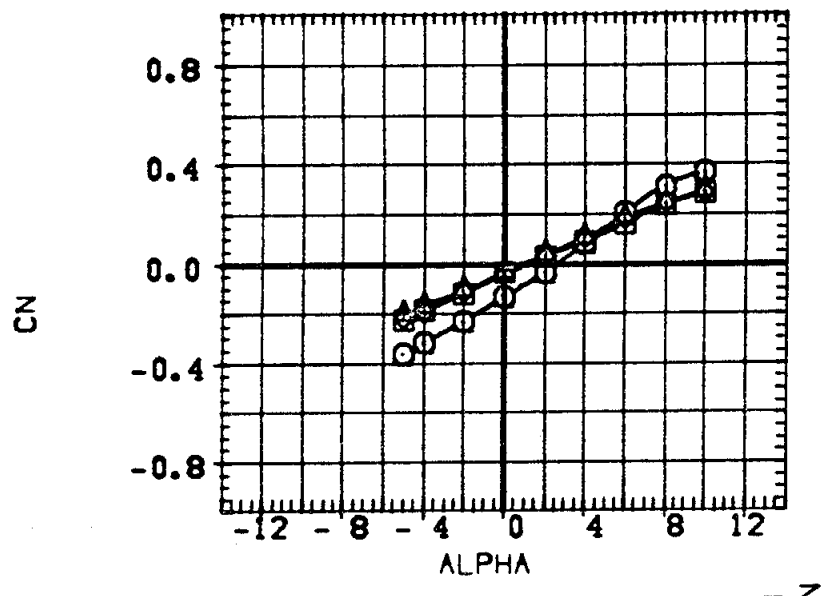
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

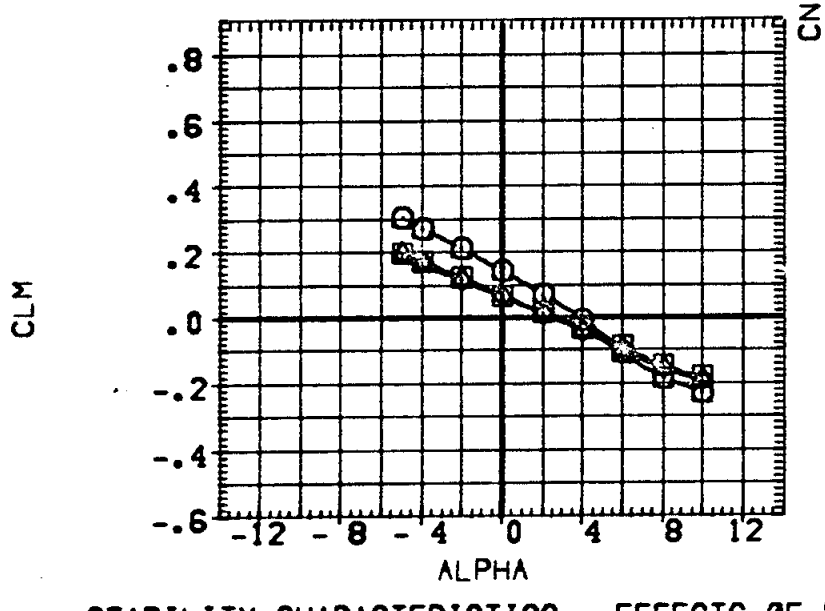
(C)MACH = .90

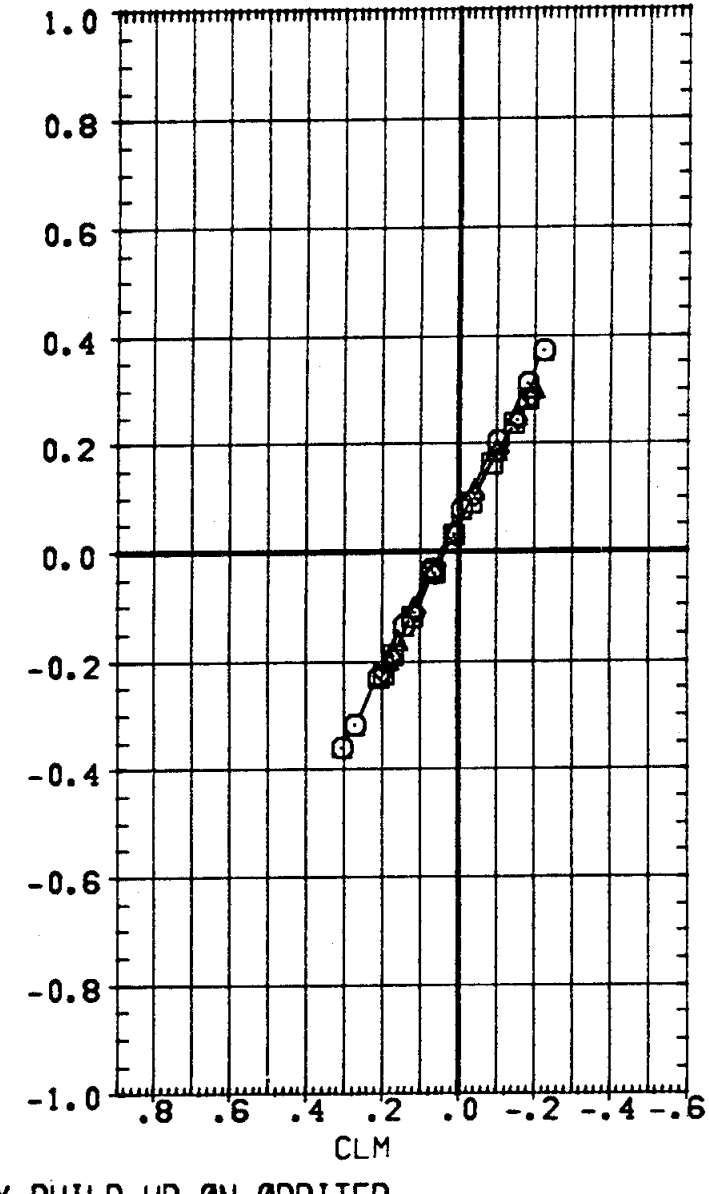
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72008)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72036)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	.000	.120	10.000	.000
(A72015)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	.000
(A72501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







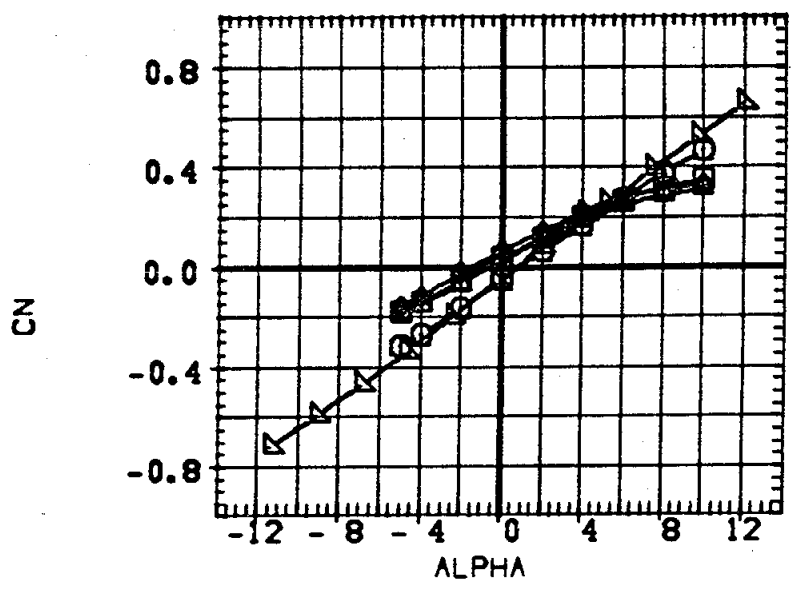
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

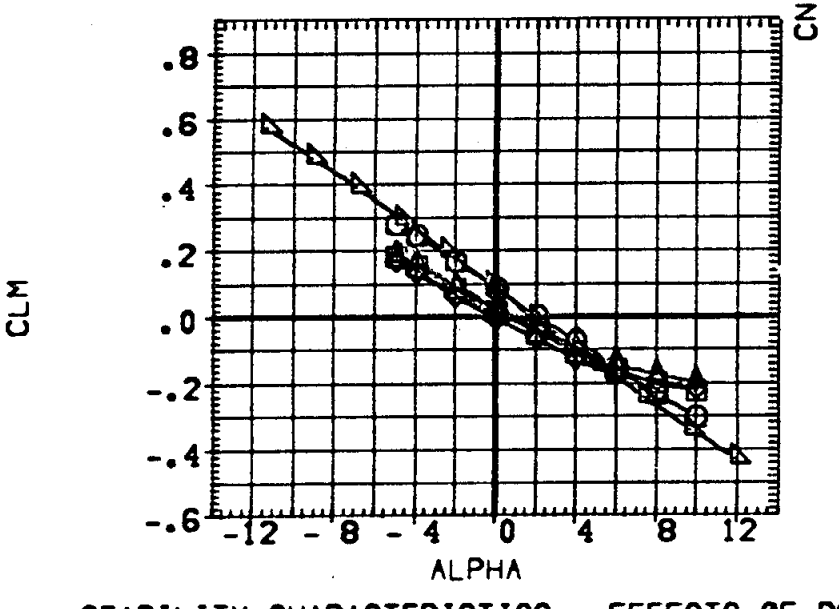
(D)MACH = 1.00

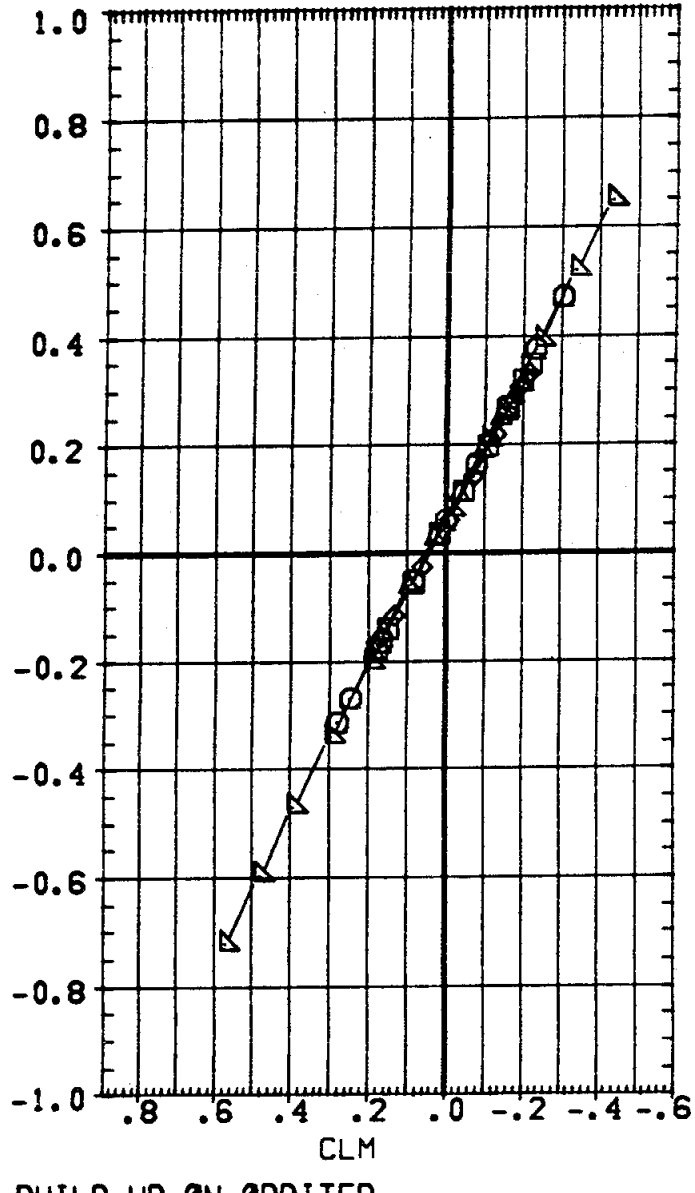
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72004)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72036)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(A72015)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
.000	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





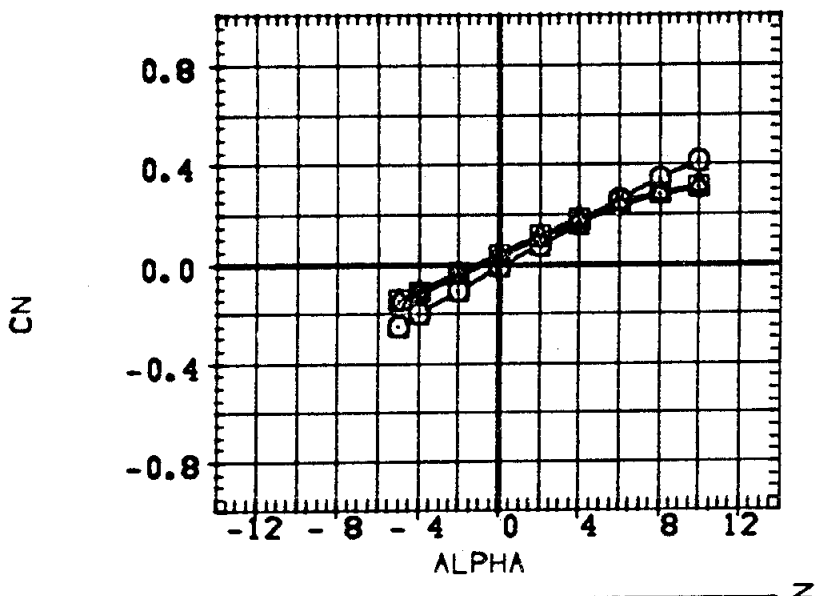


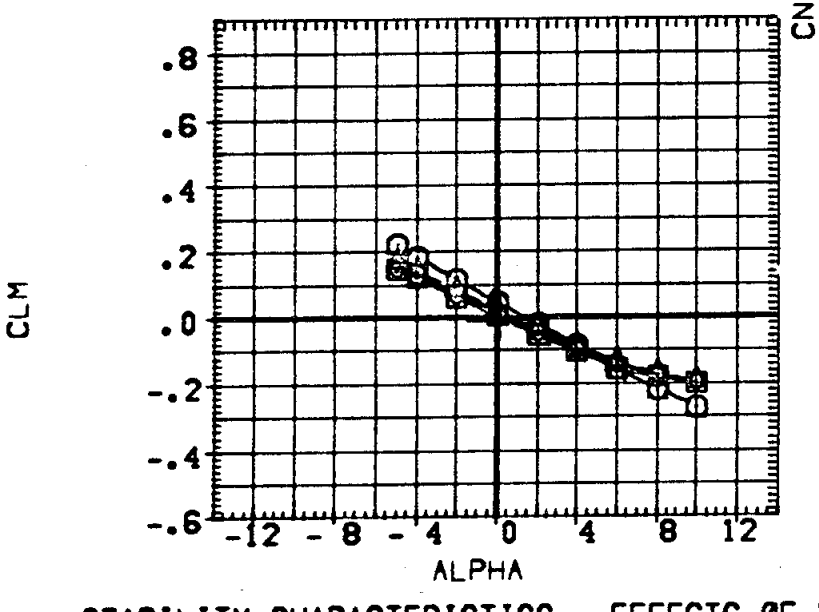
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

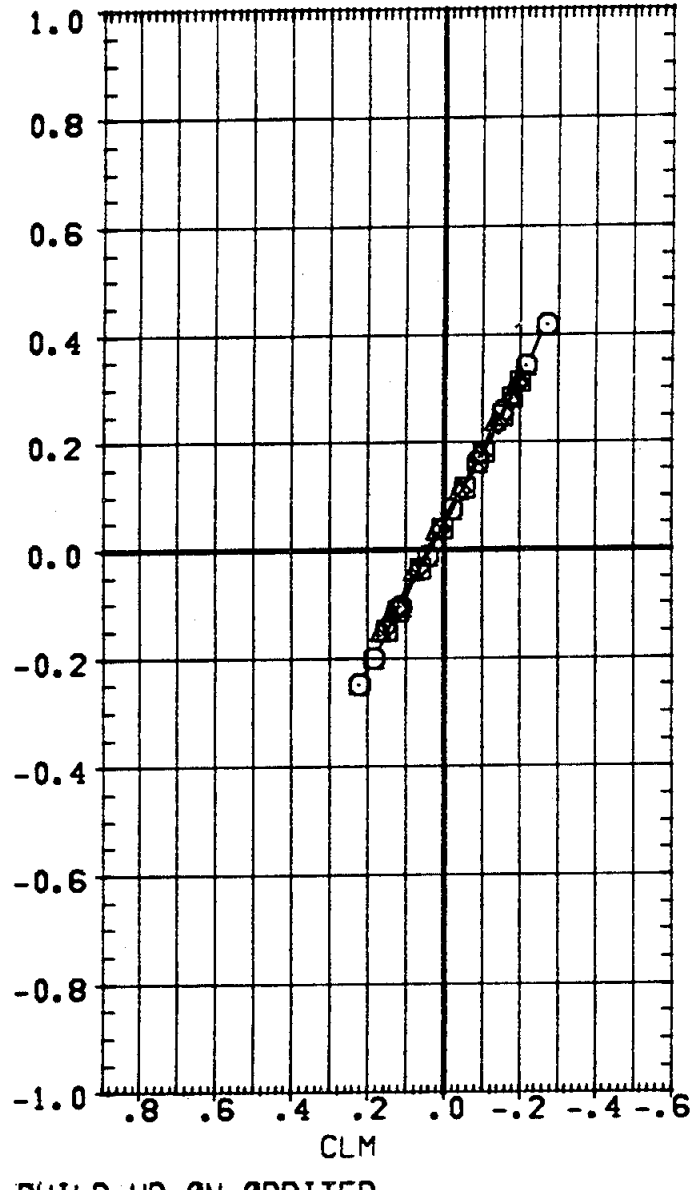
(E)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72008)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72036)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	.000	.120	10.000	.000
(A72015)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	.000
(A72501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







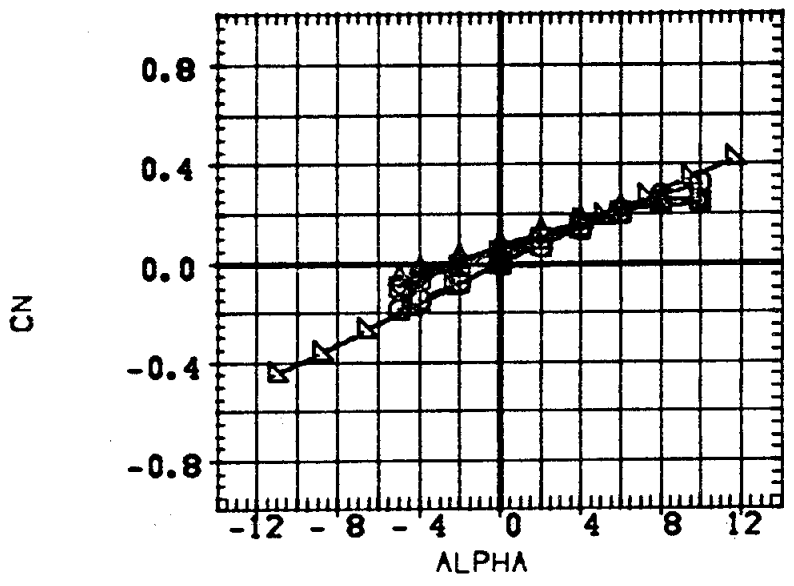
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

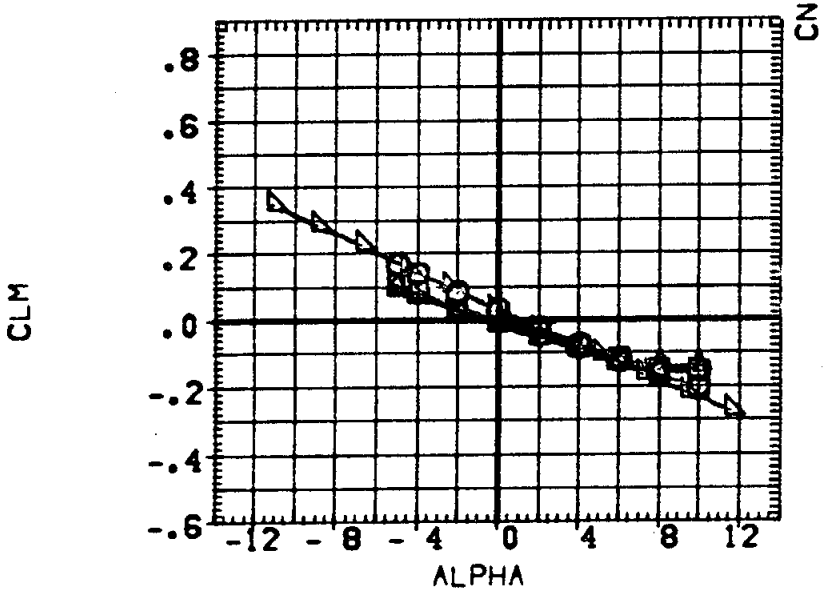
(F)MACH = 1.46

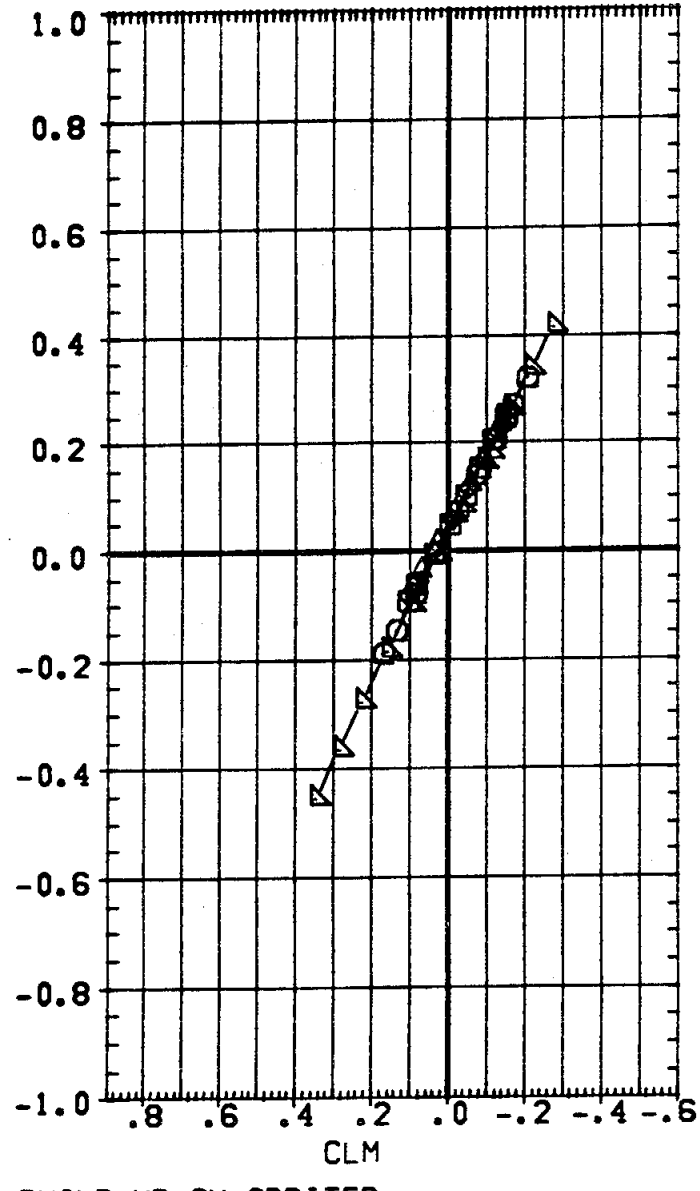
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)
(A72006)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72036)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(A72015)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)		MSFC S4S (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
.000	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







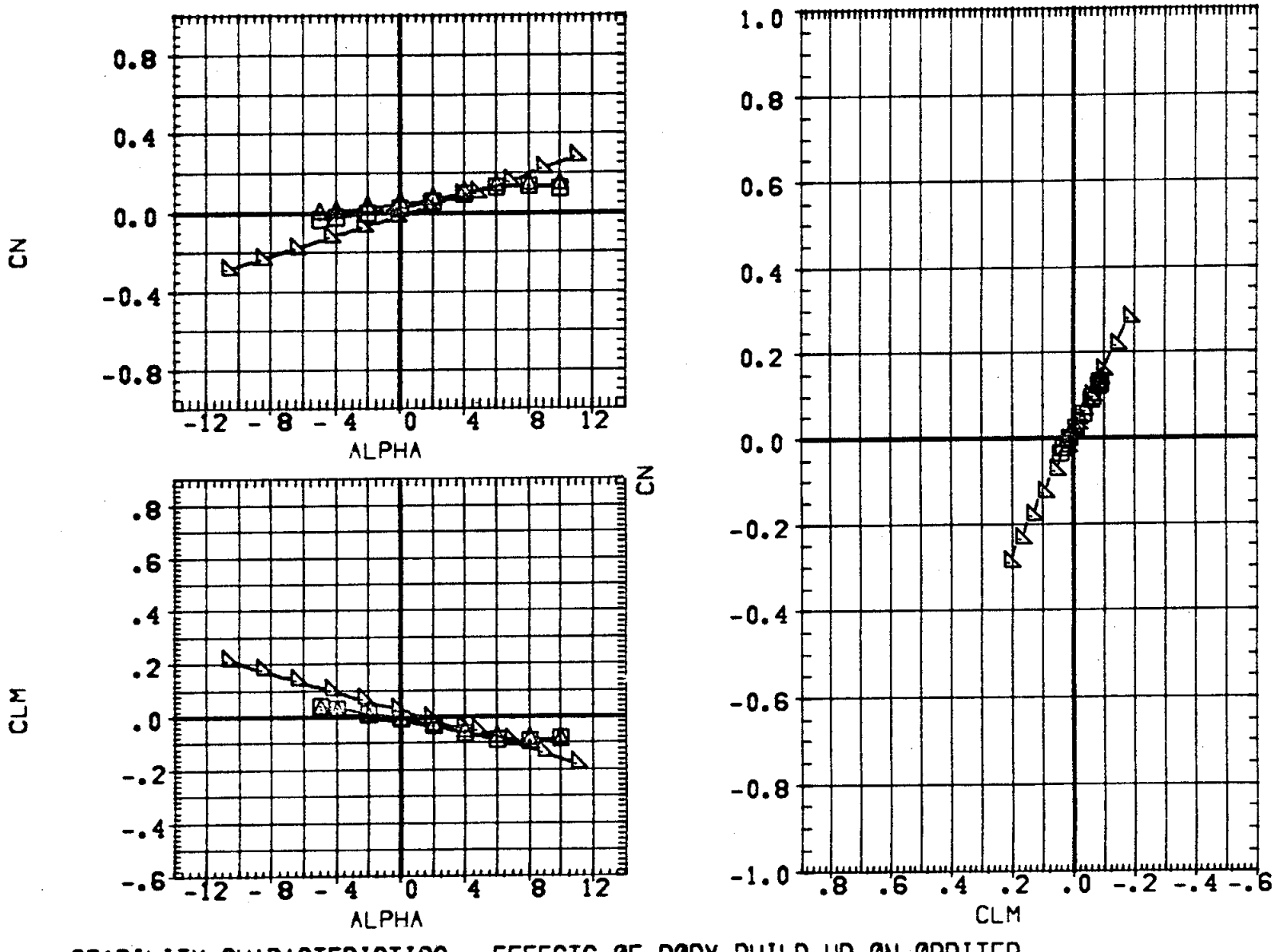
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(G)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)		DATA NOT AVAILABLE
(A72006)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72036)		DATA NOT AVAILABLE
(A72015)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72301)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
.000	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

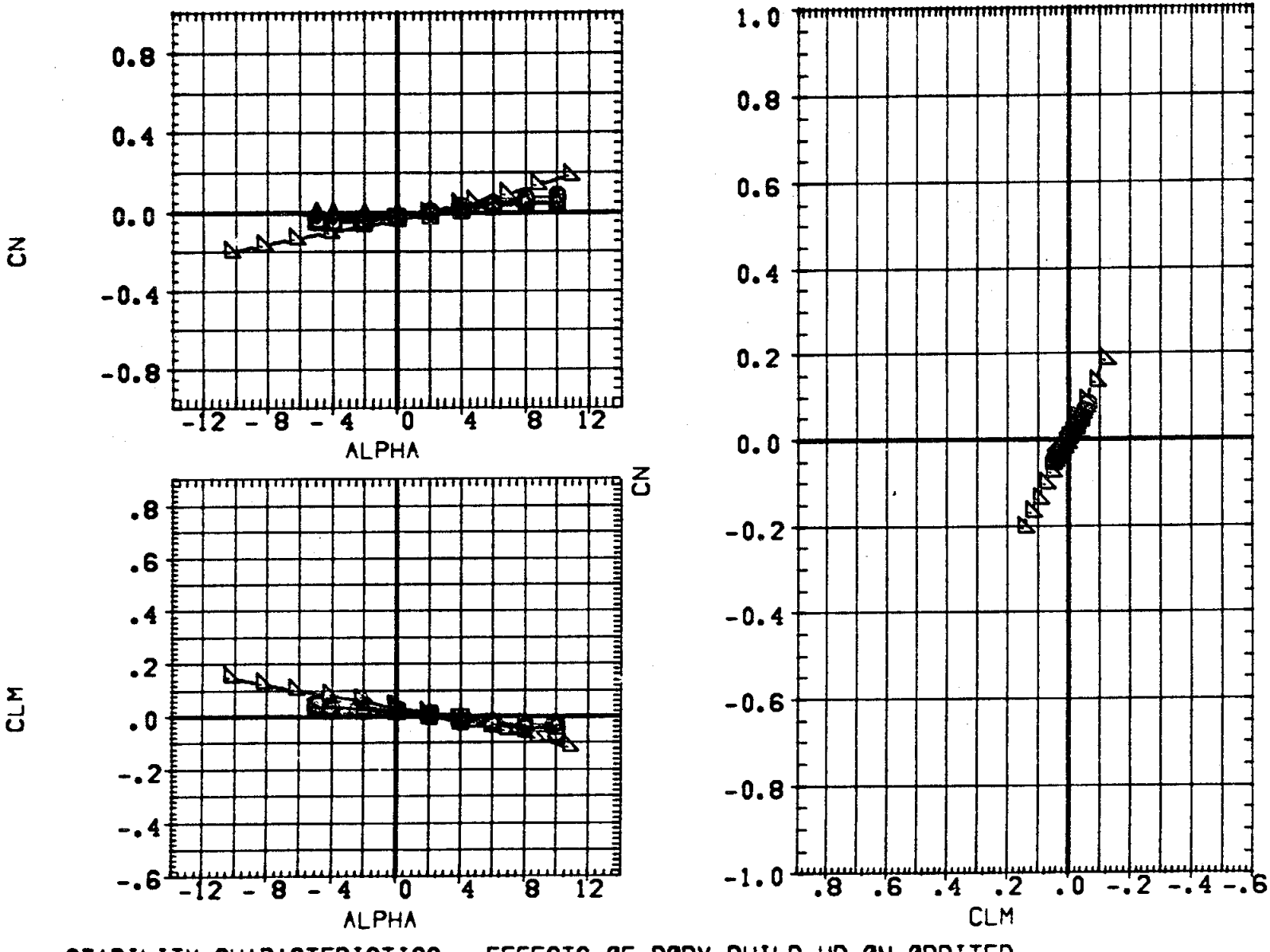
(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AY2001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AY2006)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(AY2036)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(AY2015)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(AY2501)	▽	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
.000	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

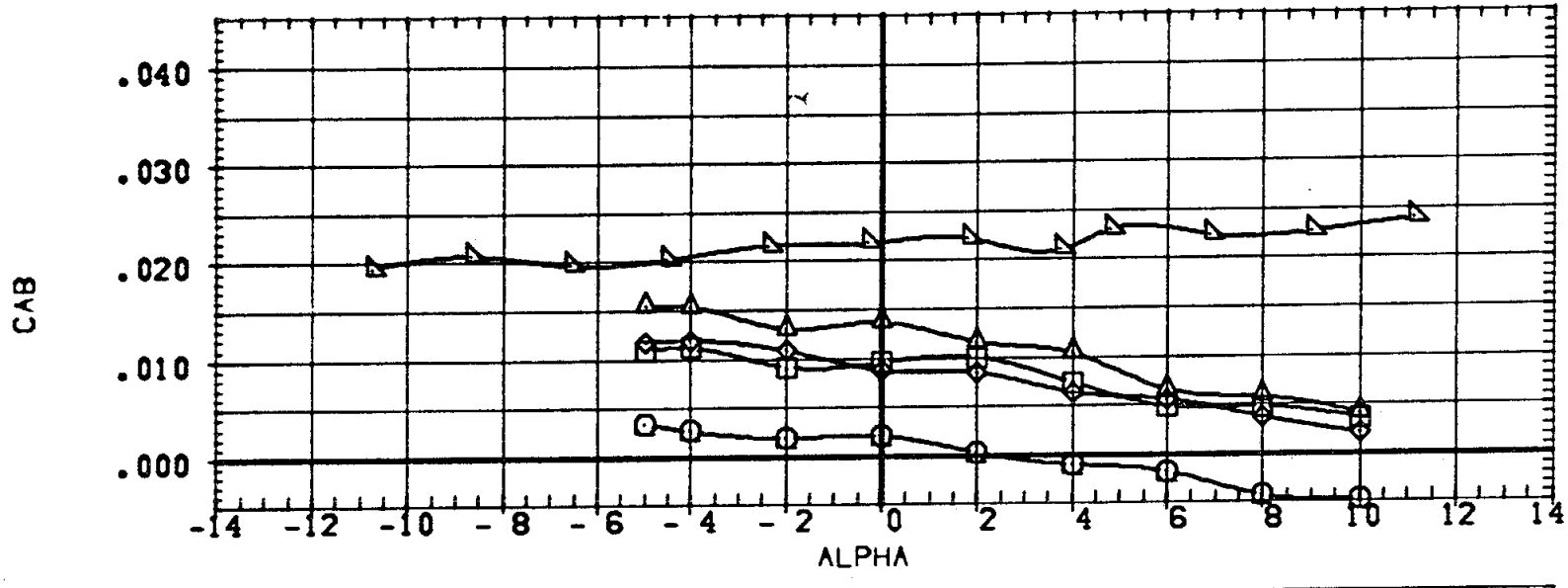


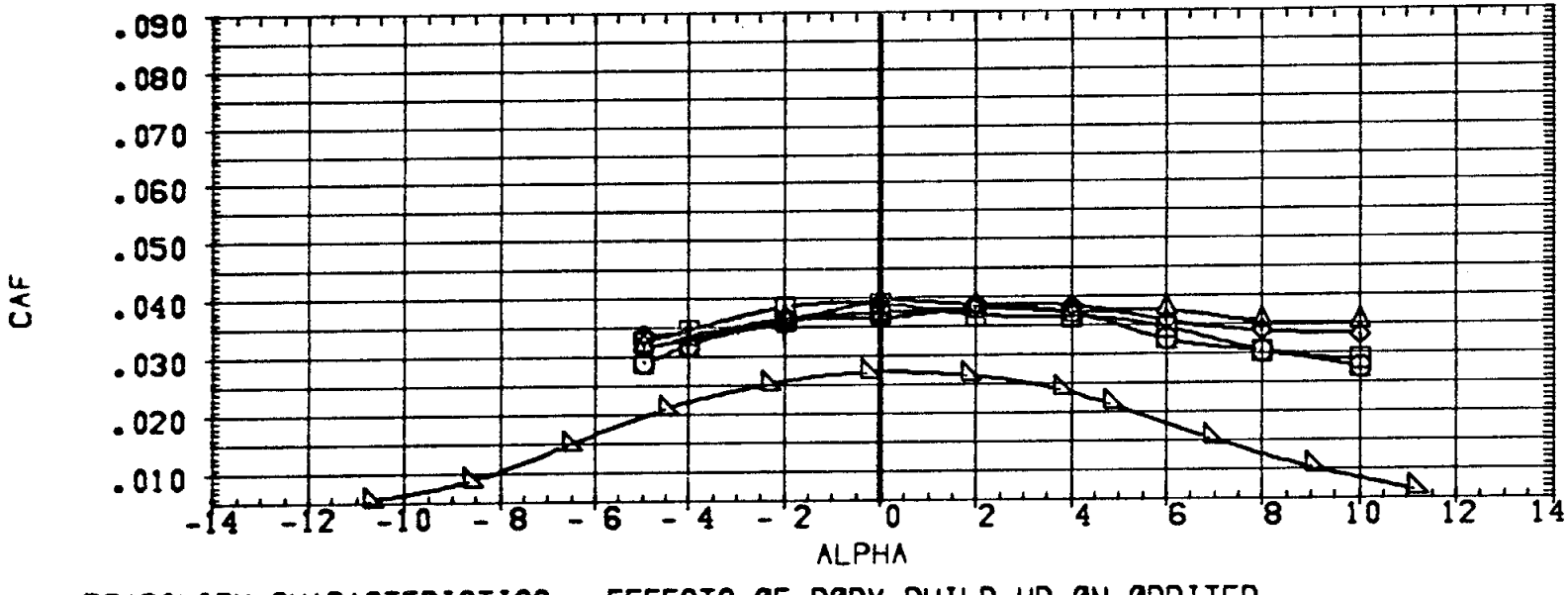
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(1)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(AY2008)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(AY2036)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	.000	.120	10.000	.000
(AY2015)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	.000
(AY2301)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



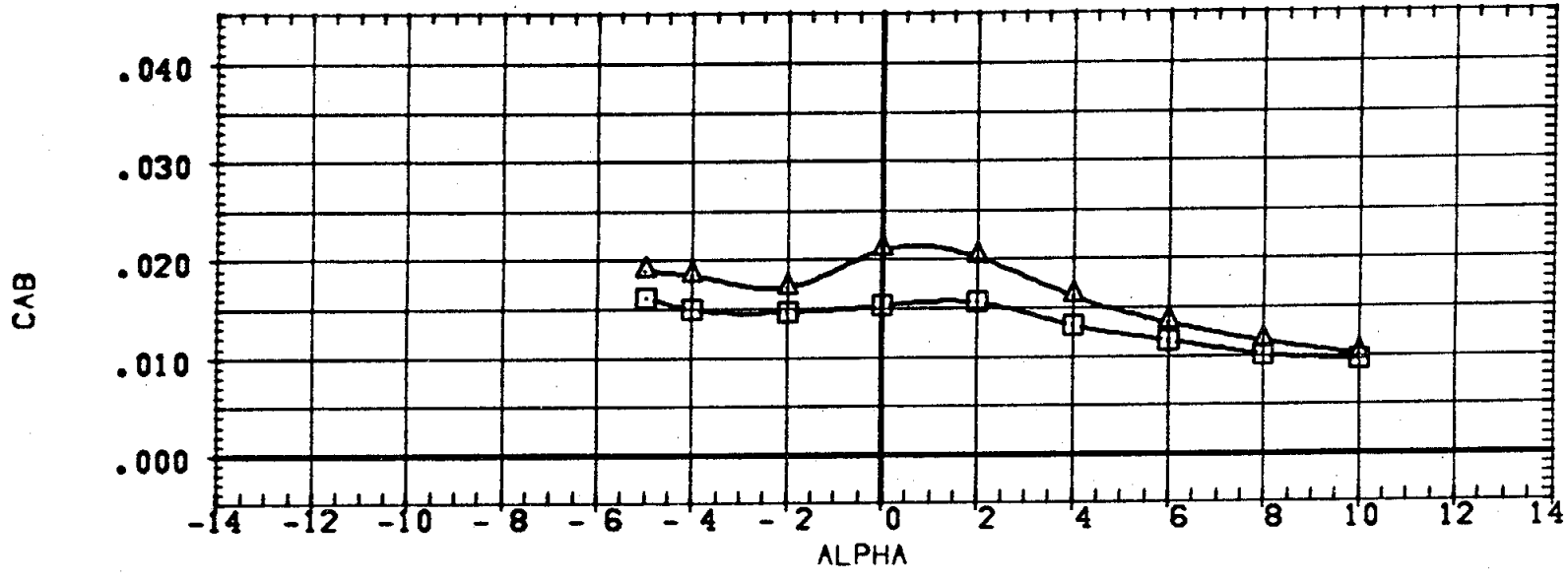


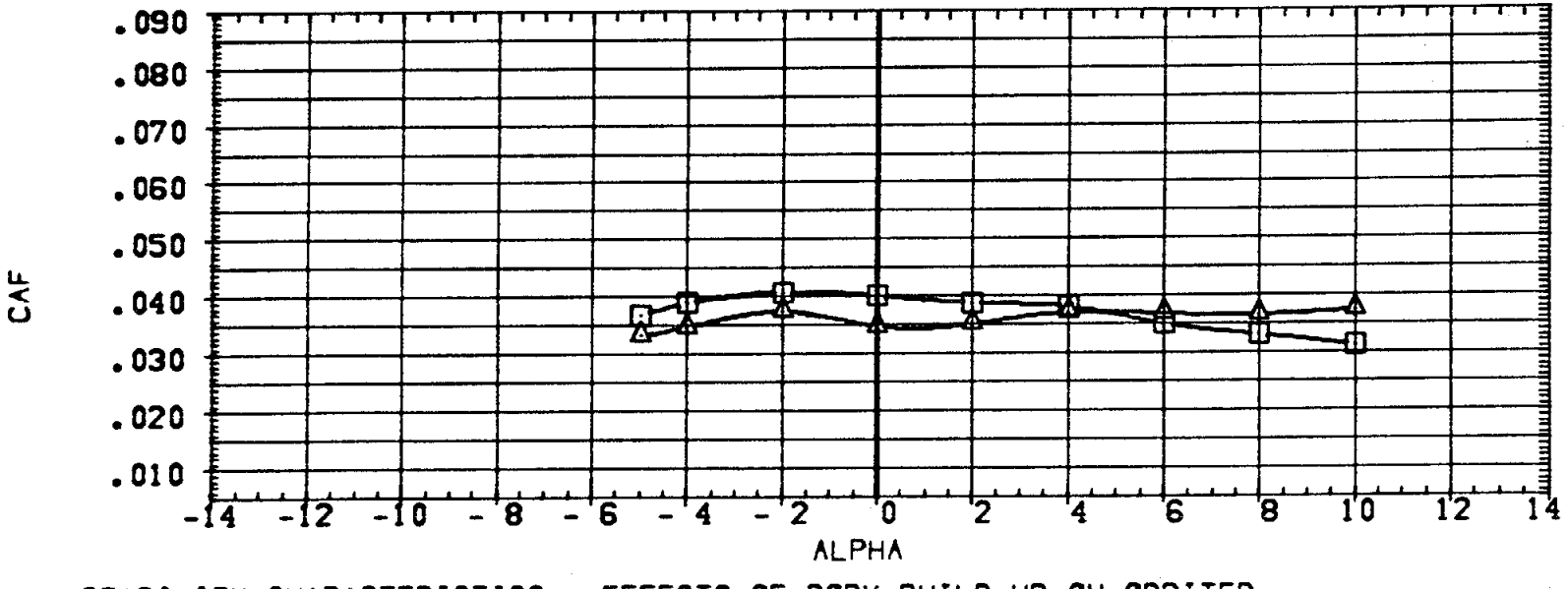
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	DATA NOT AVAILABLE	.000	.120	10.000	
(A72006)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72036)	◇	DATA NOT AVAILABLE	.000	.120	10.000	.000
(A72015)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	.000
(A72501)	▽	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3280.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





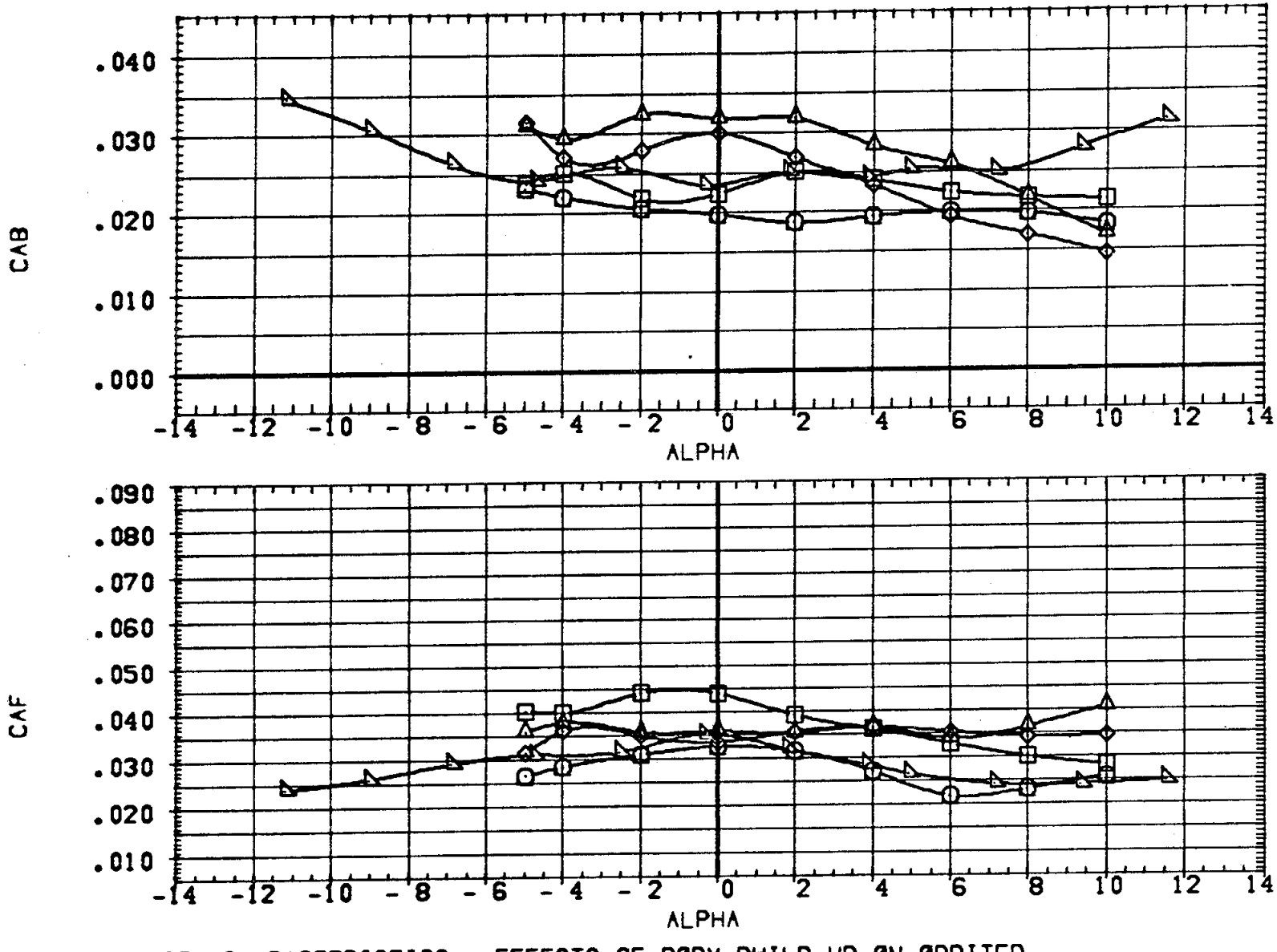
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72008)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72036)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	.000	.120	10.000	.000
(A72015)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	.000
(A72501)	▽	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



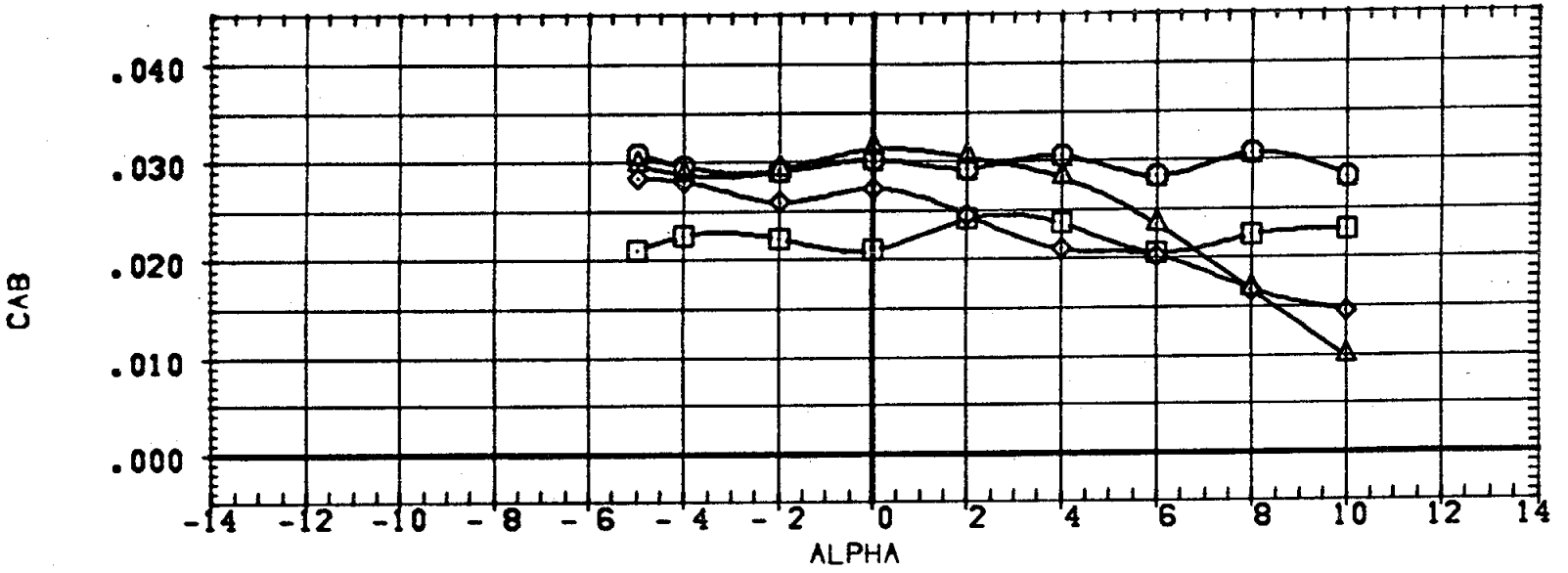
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

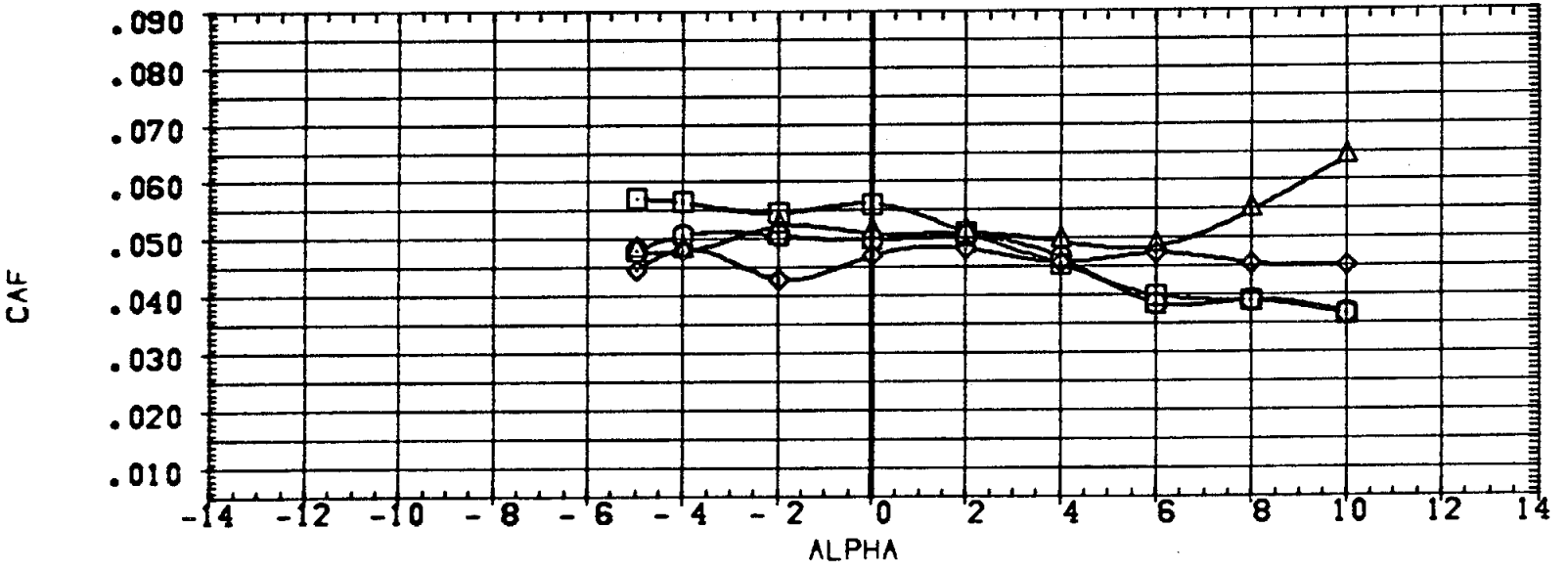
(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72006)	⊠	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72036)	◇	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	.000	.120	10.000	.000
(A72015)	□	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	.000
(A72501)	⊿	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





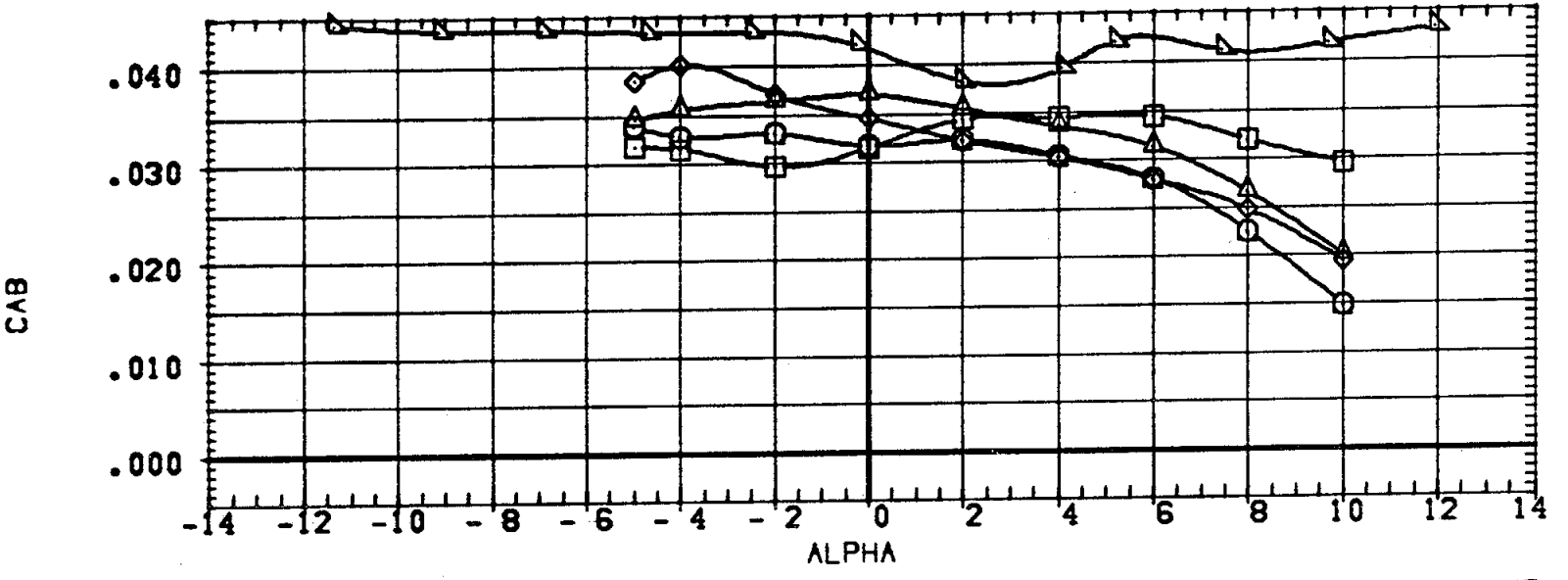
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

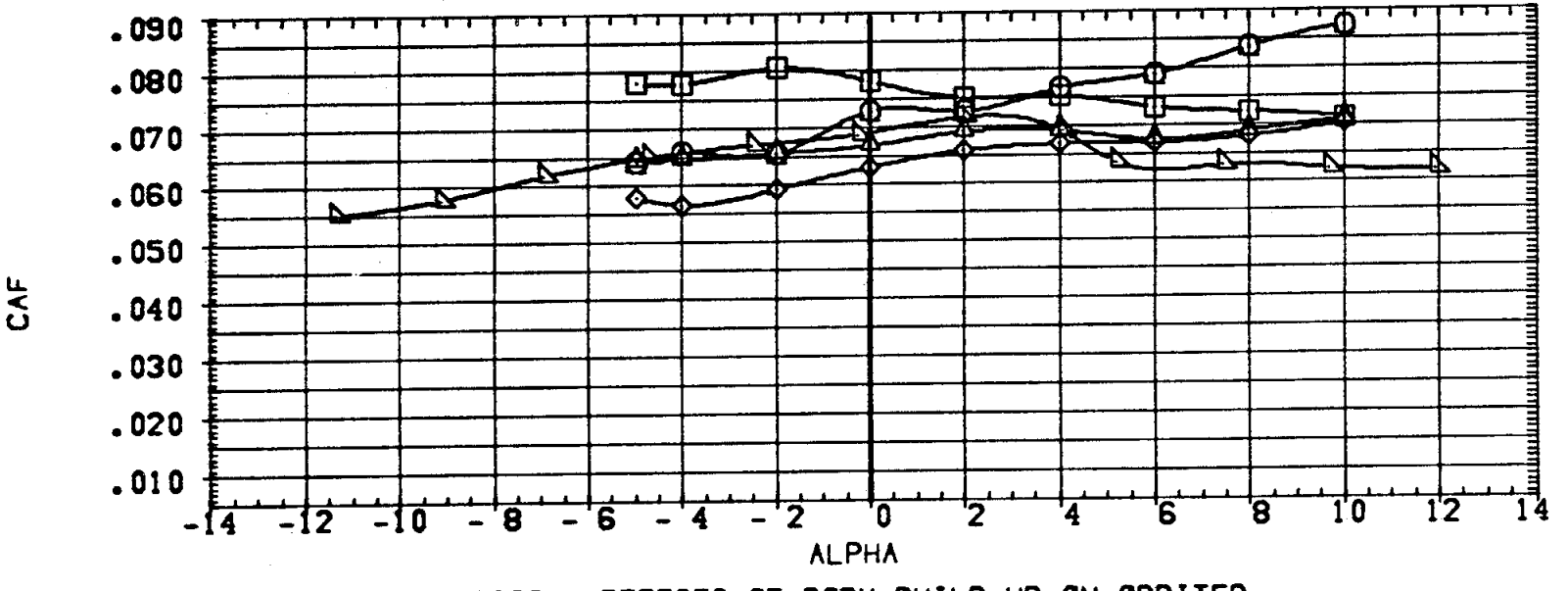
(D)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2001)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)	.000	.120	10.000	
(AY2008)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)	.000	.120	10.000	.000
(AY2036)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1/2)/(S1/2)	.000	.120	10.000	.000
(AY2015)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)	.000	.120	10.000	.000
(AY2501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





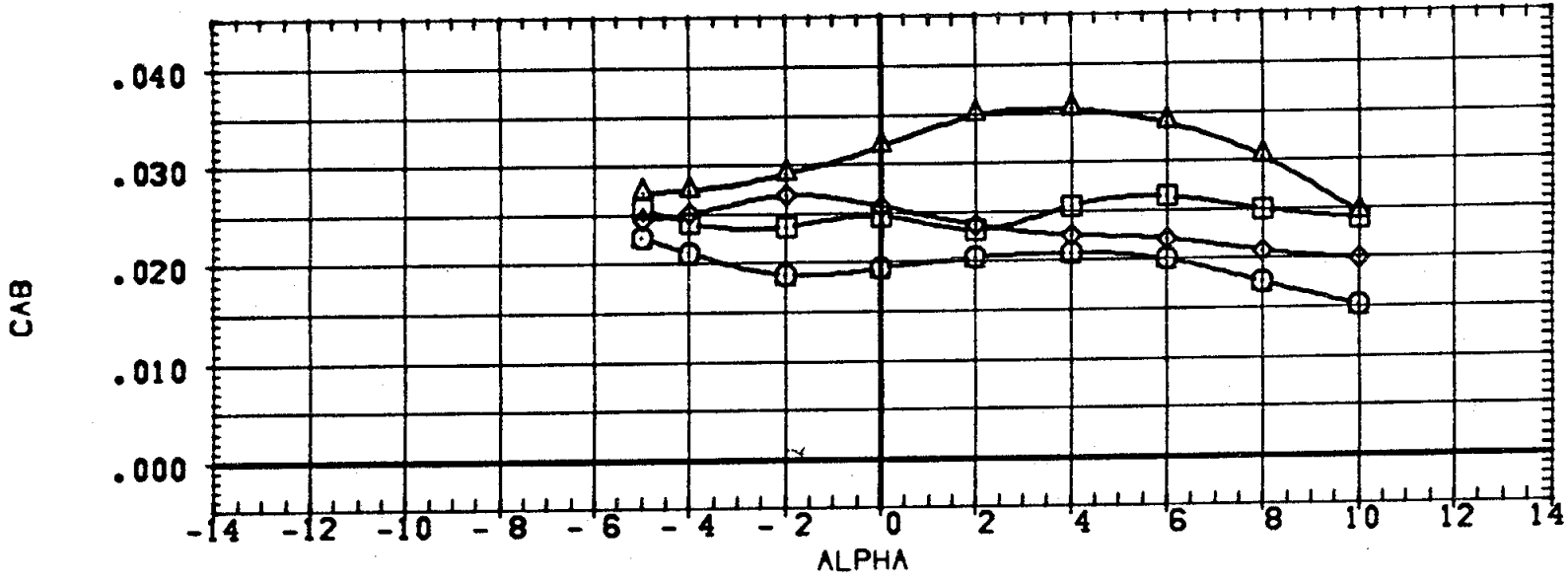
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

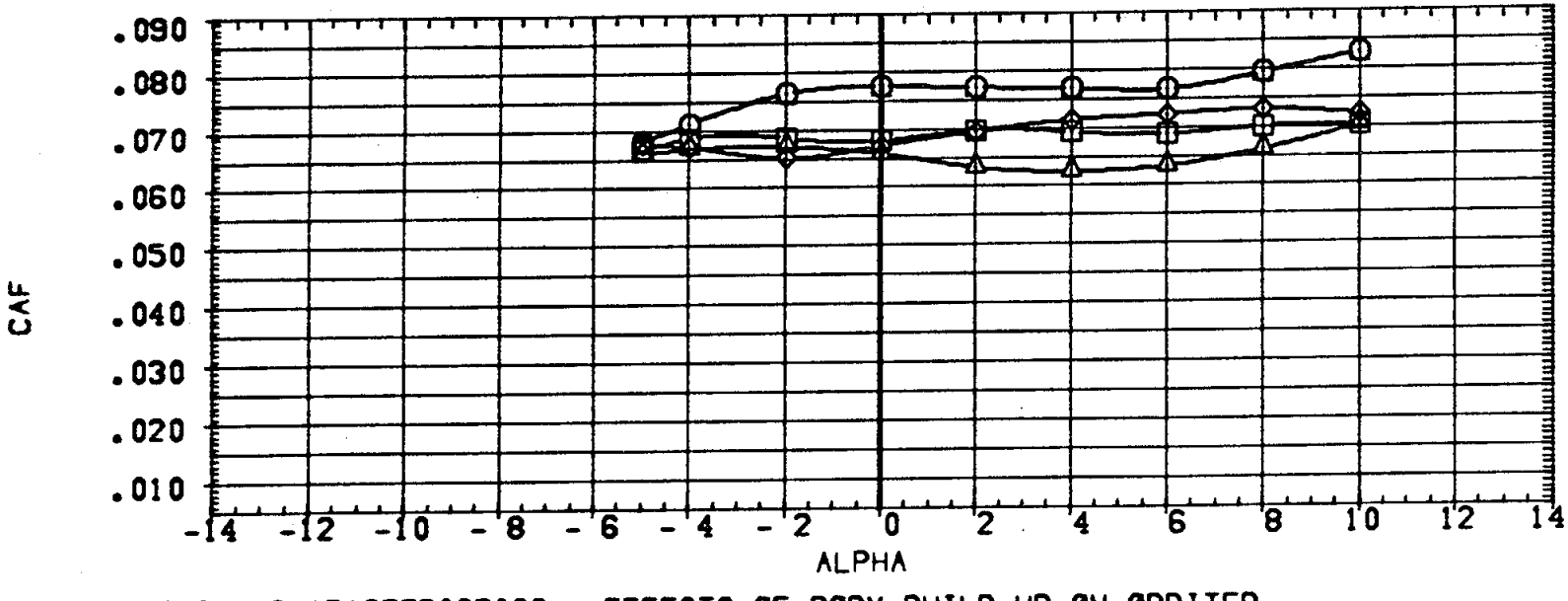
(E)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72006)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(B1)	.000	.120	10.000	.000
(A72036)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(B1/2)/(B1/2)	.000	.120	10.000	.000
(A72015)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(B1)	.000	.120	10.000	.000
(A72501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



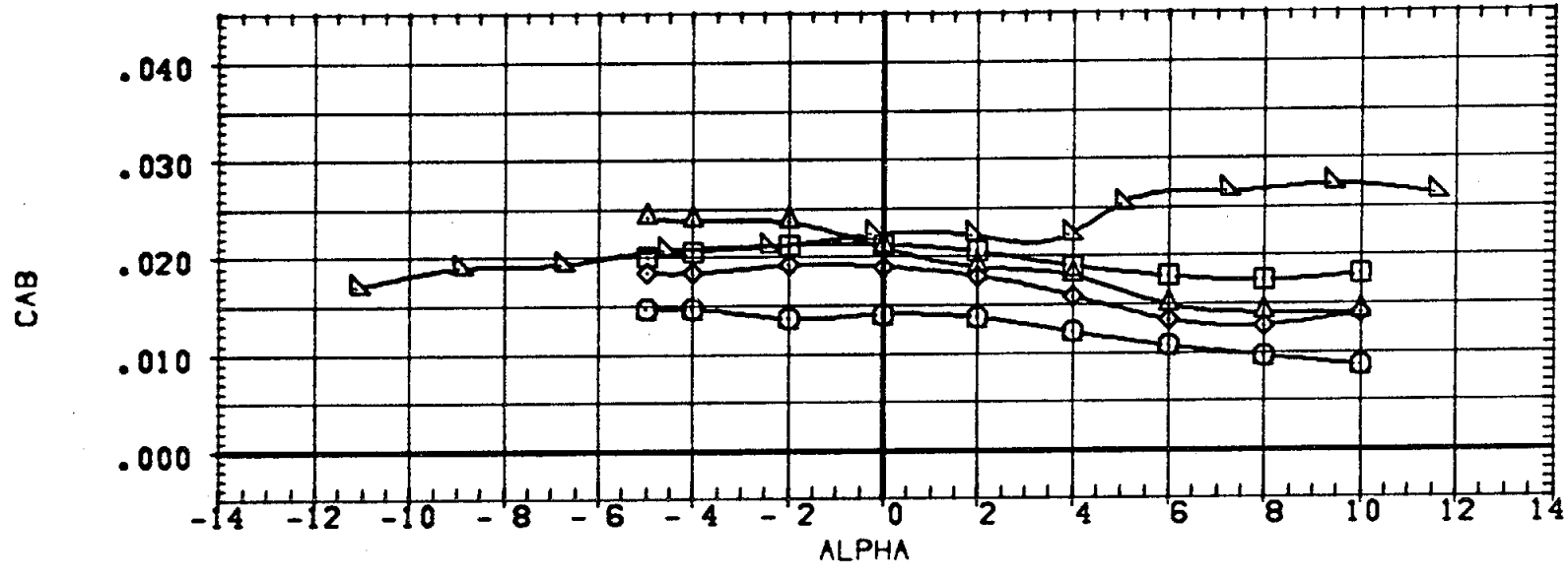


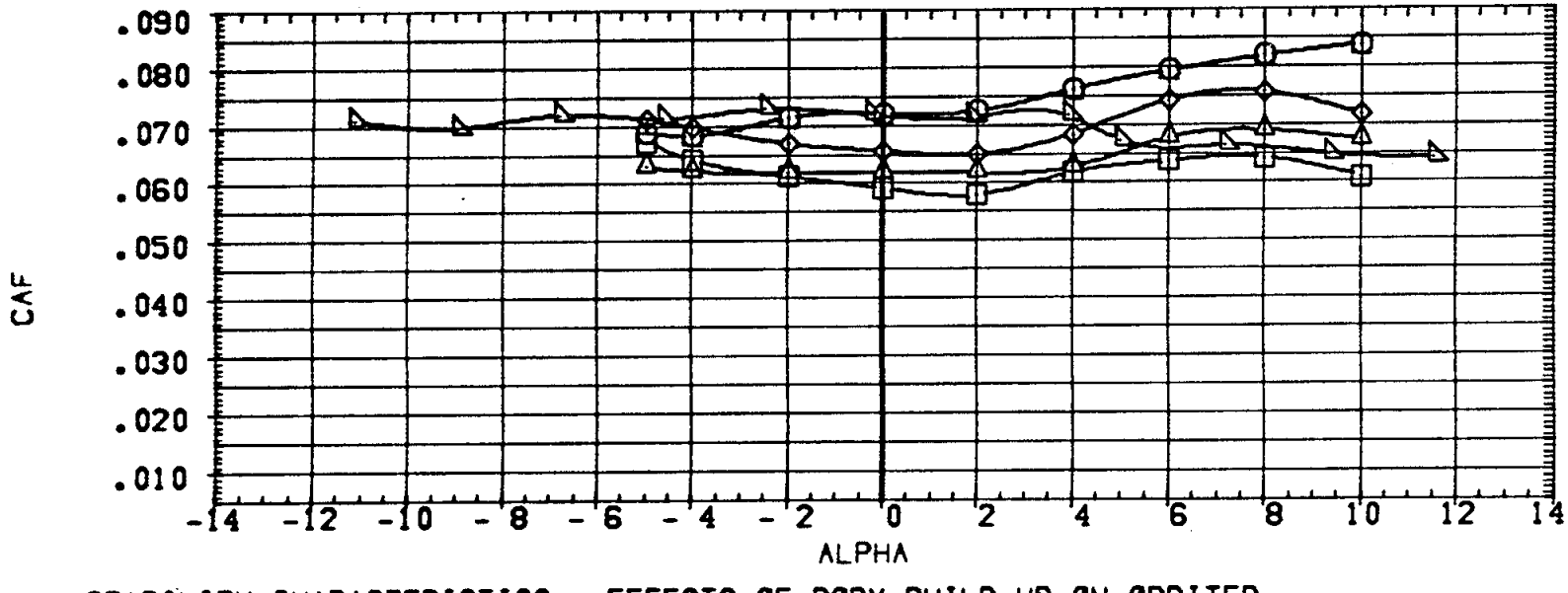
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72008)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72036)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	.000	.120	10.000	.000
(A72015)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	.000
(A72501)		MSFC S4S (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





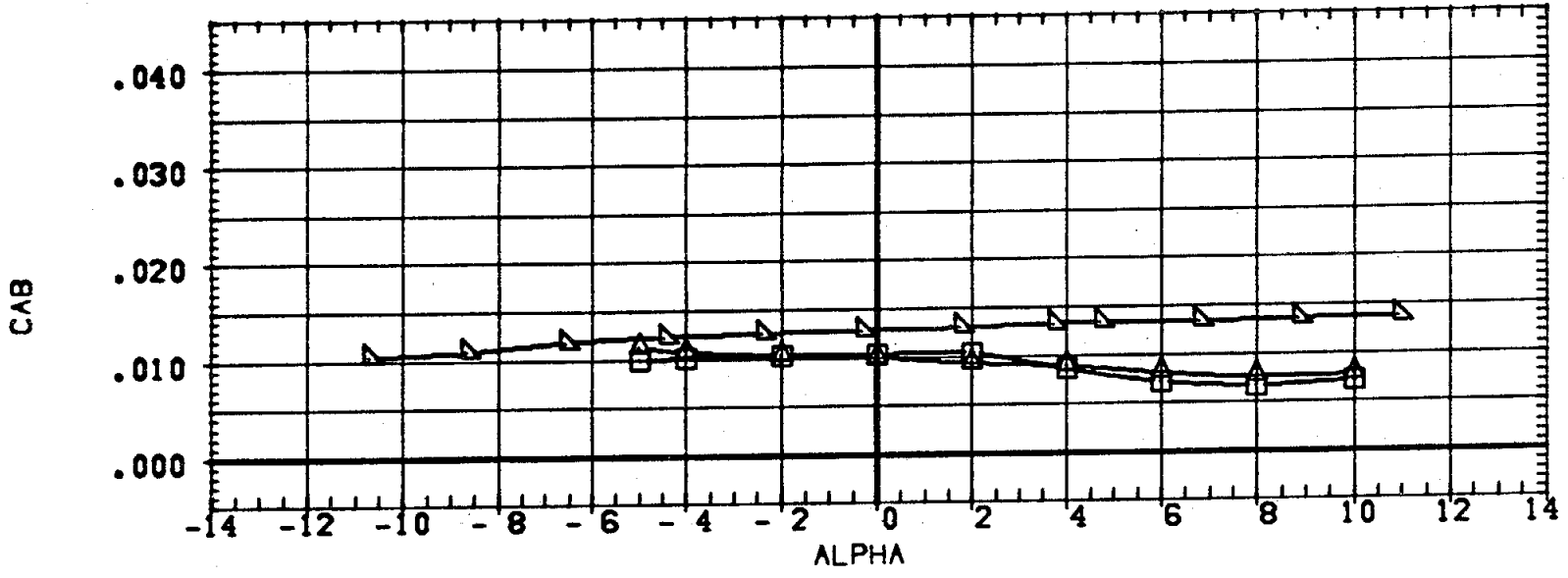
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

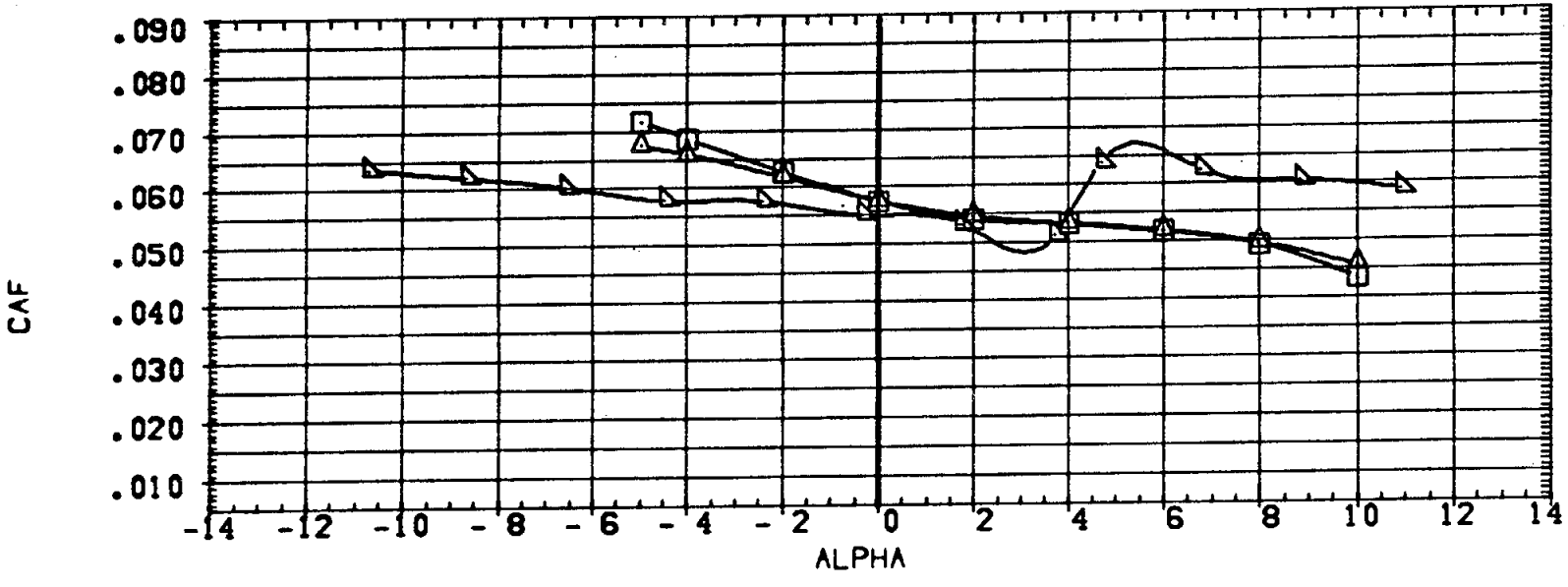
(G)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2001)		DATA NOT AVAILABLE
(AP2008)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(AP2036)		DATA NOT AVAILABLE
(AP2015)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(AP2501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
.000	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



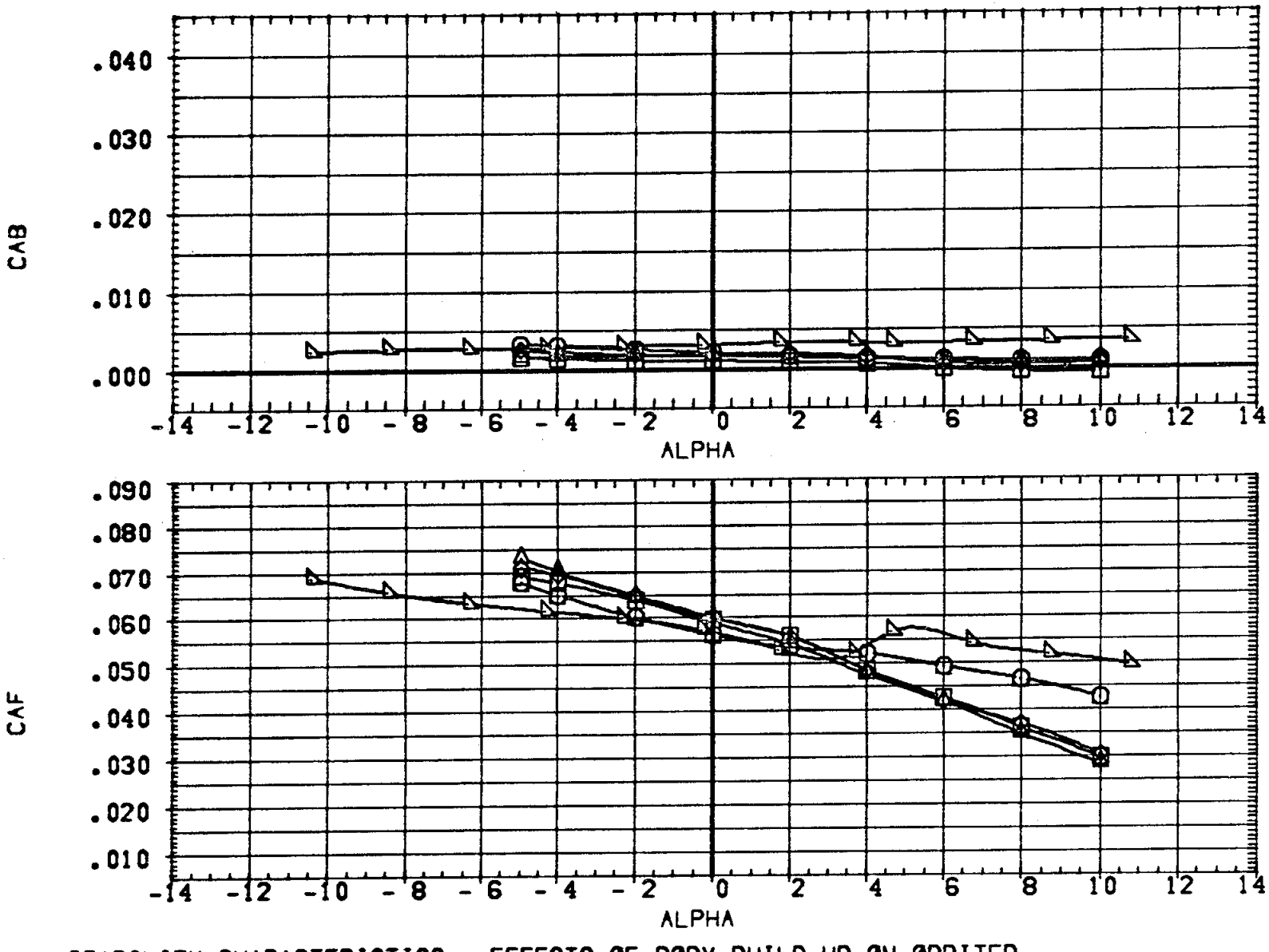


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72008)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	.000
(A72036)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	.000	.120	10.000	.000
(A72015)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	.000
(A72501)		MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

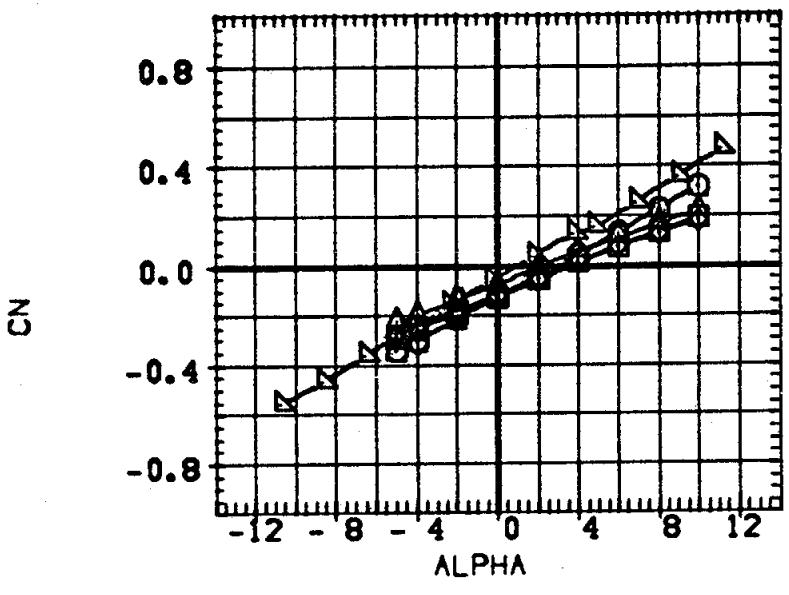
(I)MACH = 4.96

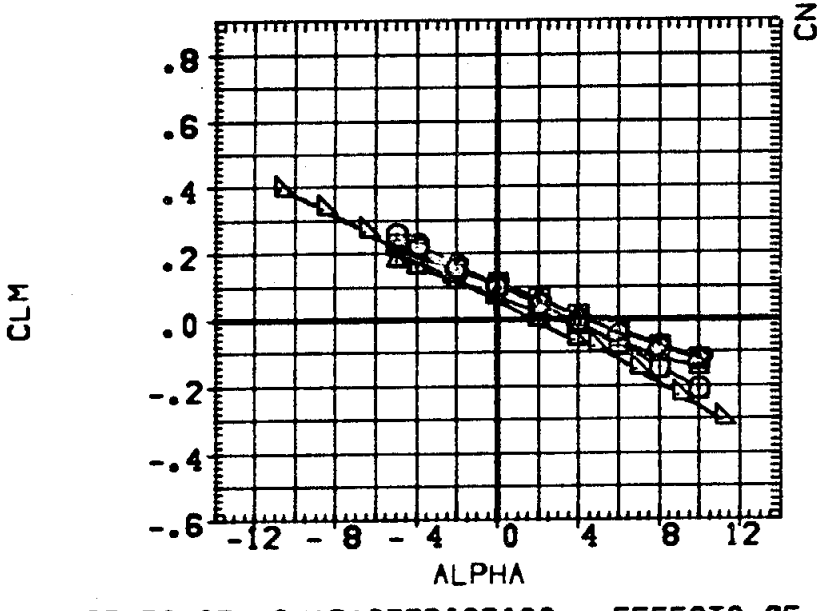
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)
(A72009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)(S1)
(A72037)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)(S1/2)/(S1/2)
(A72016)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)/(S1)
(A72501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

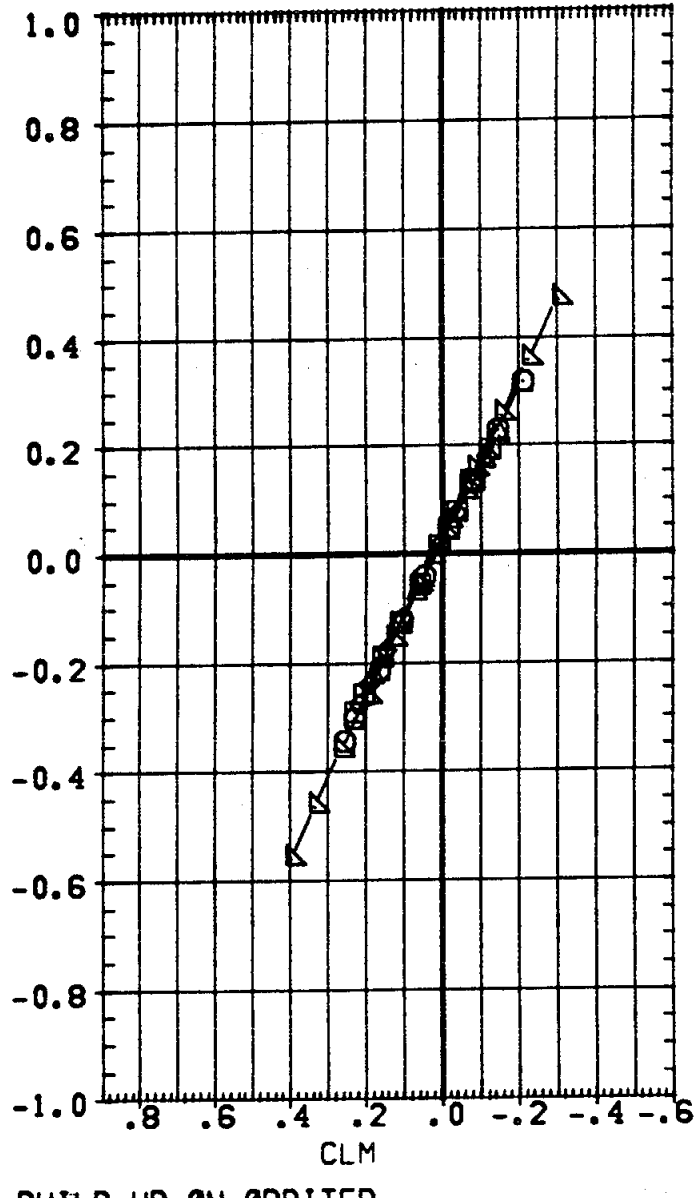
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







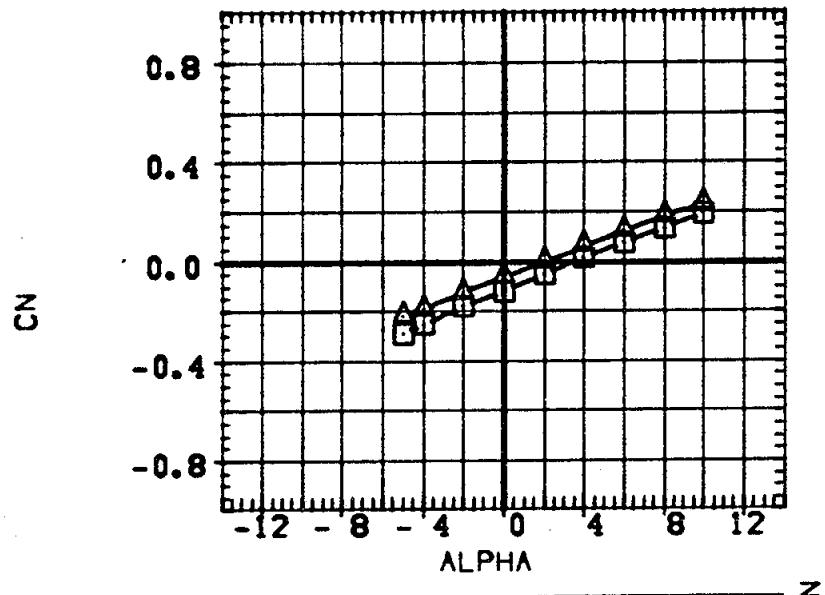
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

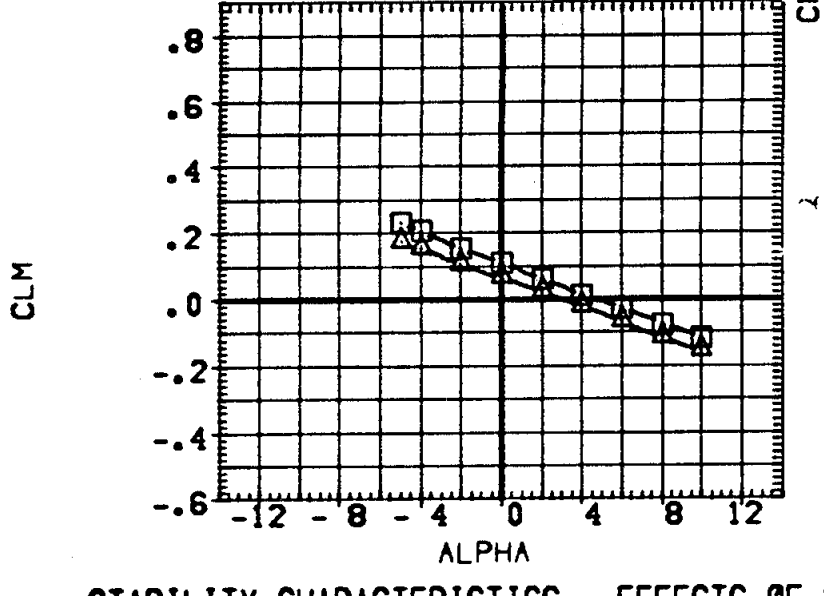
(A)MACH = .60

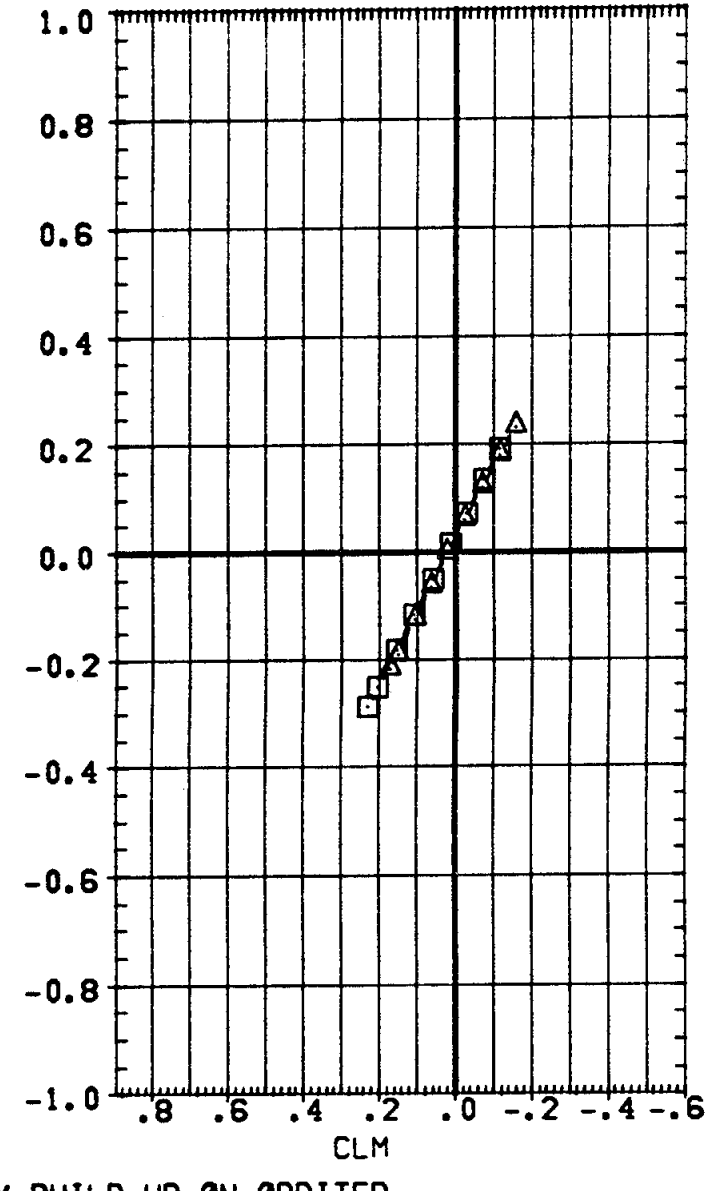
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)		DATA NOT AVAILABLE
(A72009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72037)		DATA NOT AVAILABLE
(A72016)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)		DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

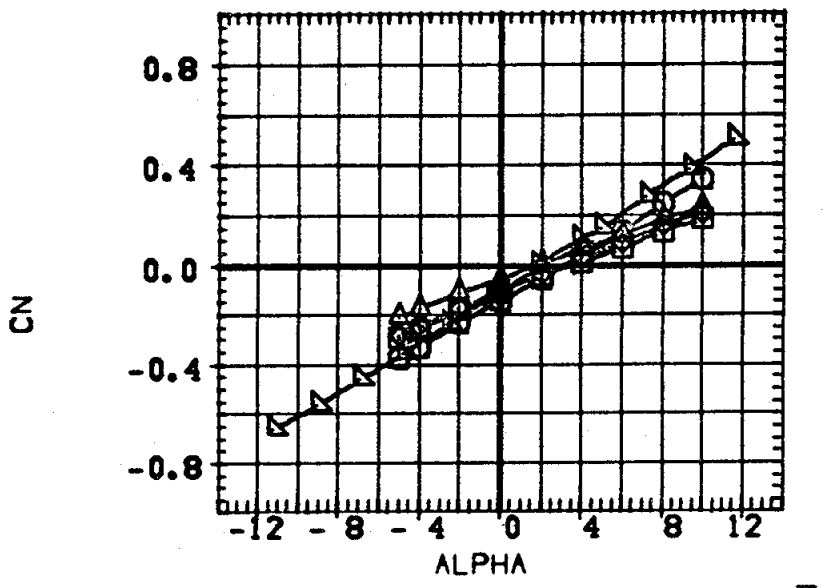
(B)MACH = .80

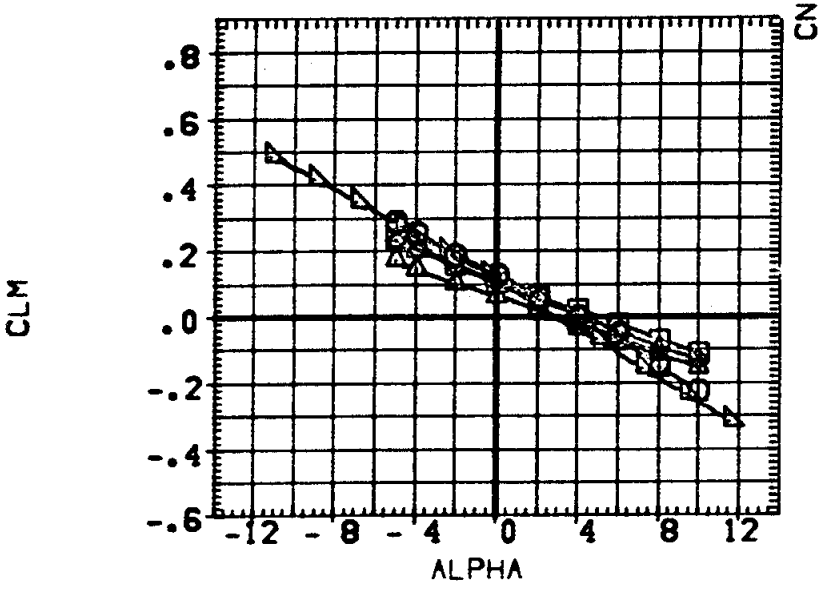
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72009)	□	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72037)	◇	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(A72016)	▽	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	△	HSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

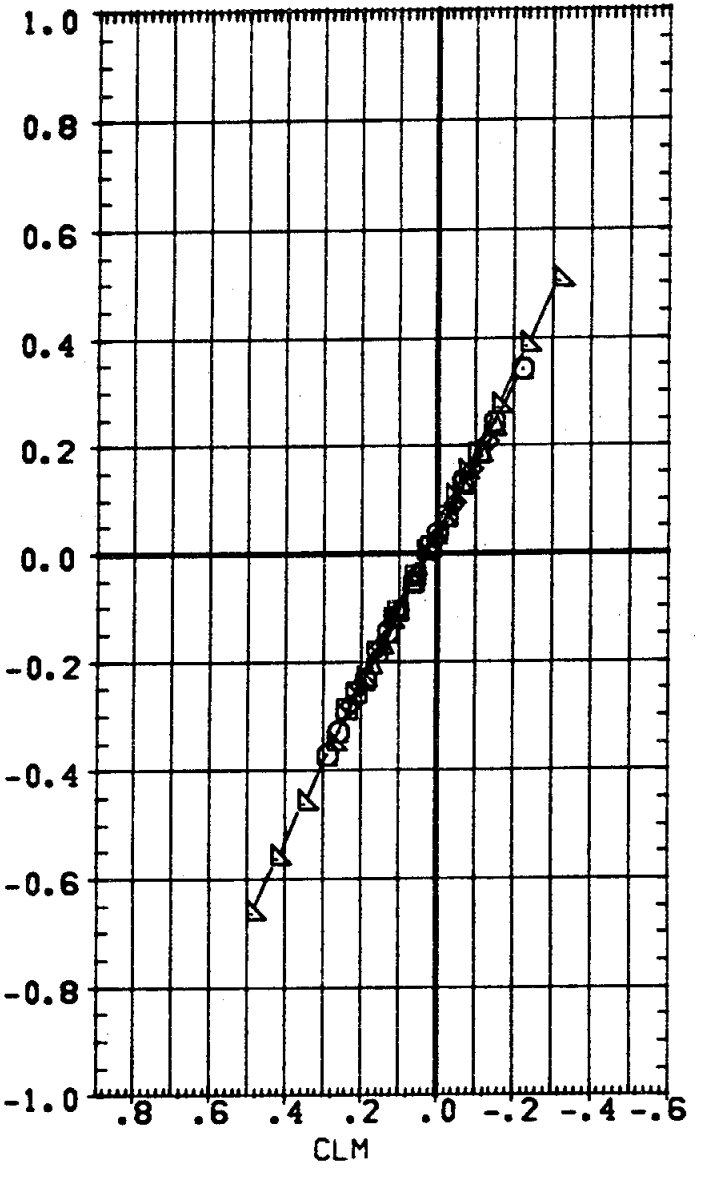
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







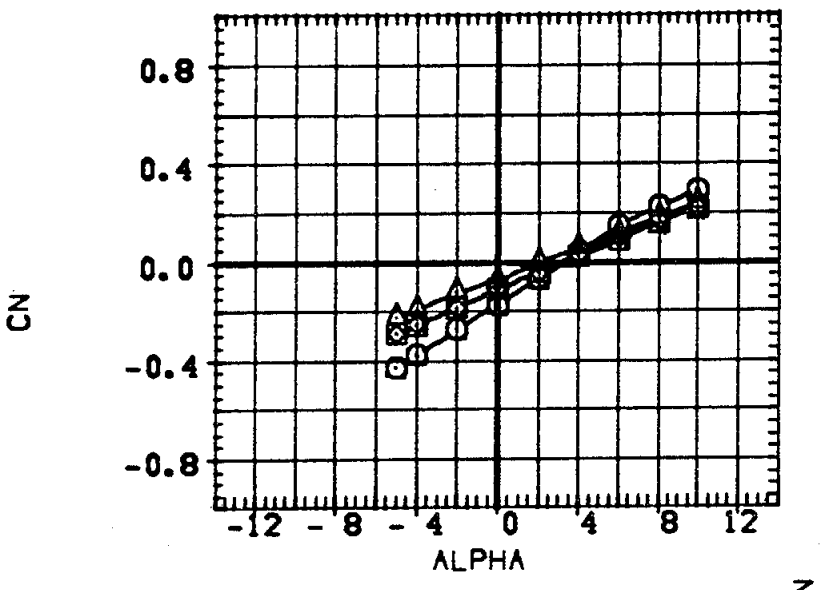
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

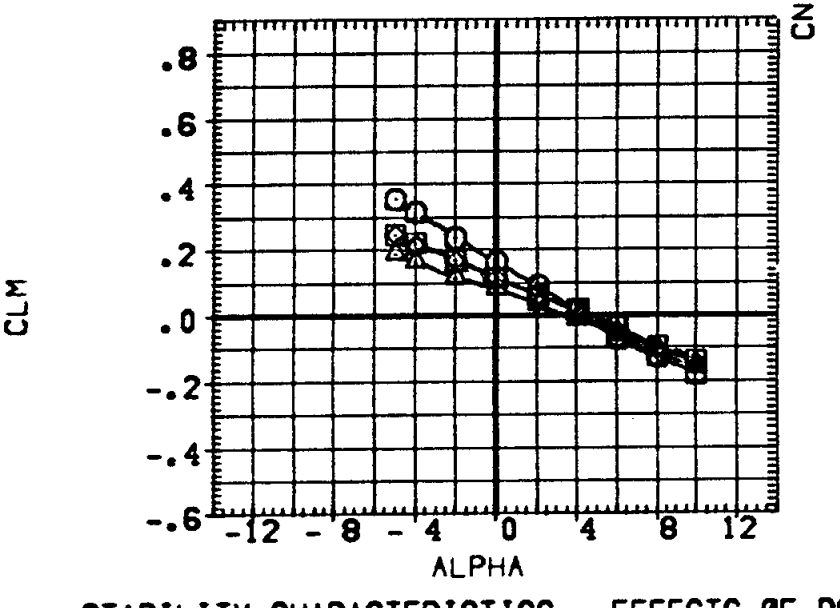
(C)MACH = .90

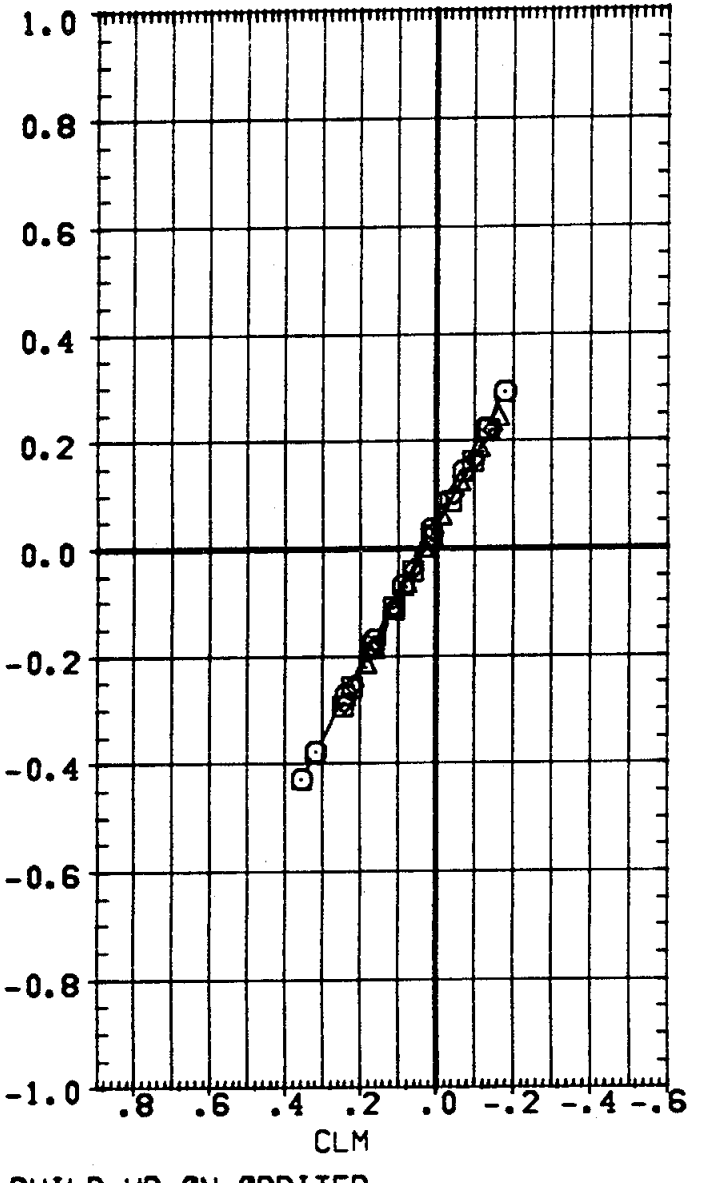
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AP2008)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(AP2037)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(AP2016)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(AP2501)	△	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

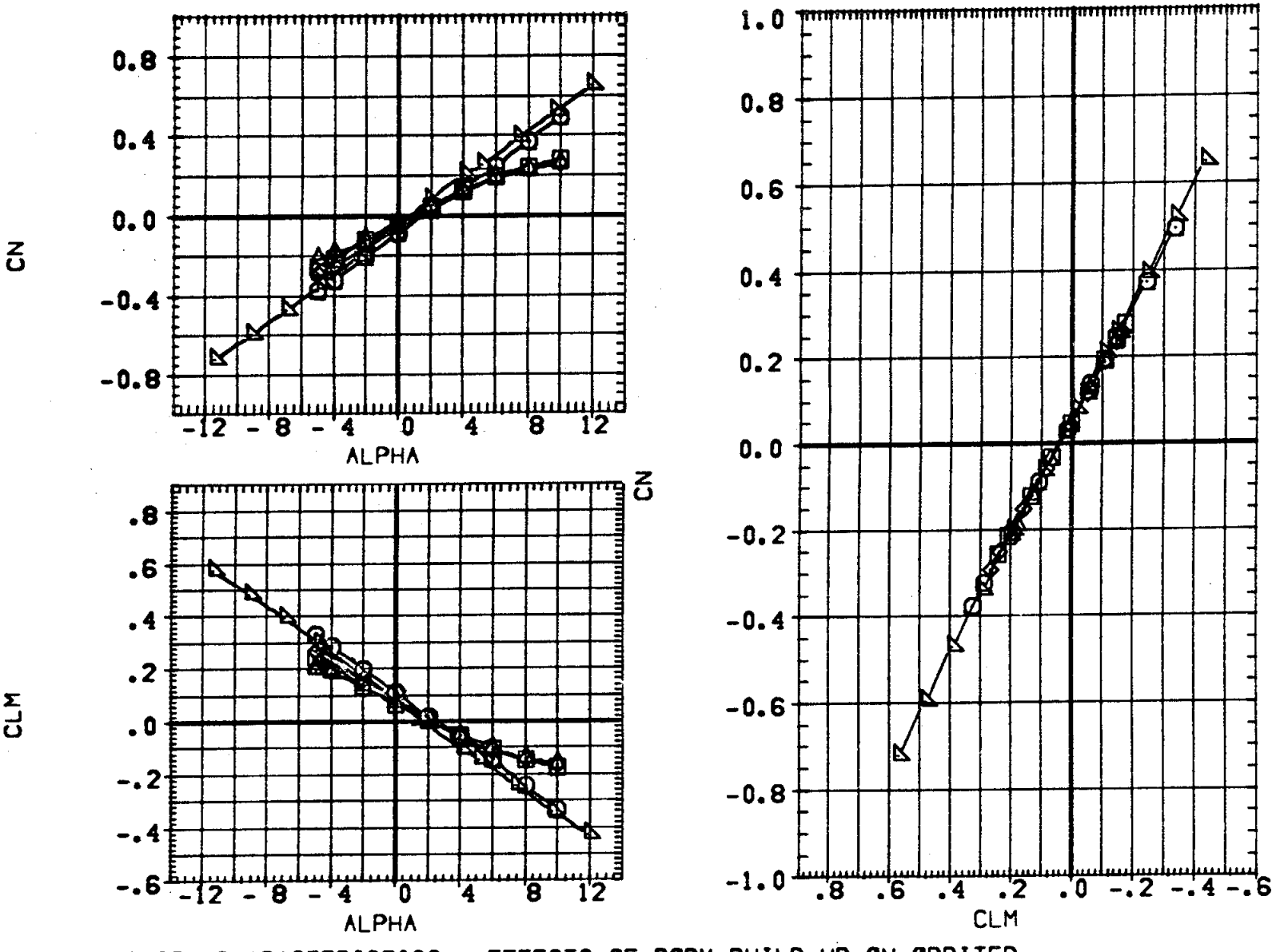
(O)MACH = .99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)
(A72009)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1)
(A72037)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(A72016)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)		MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

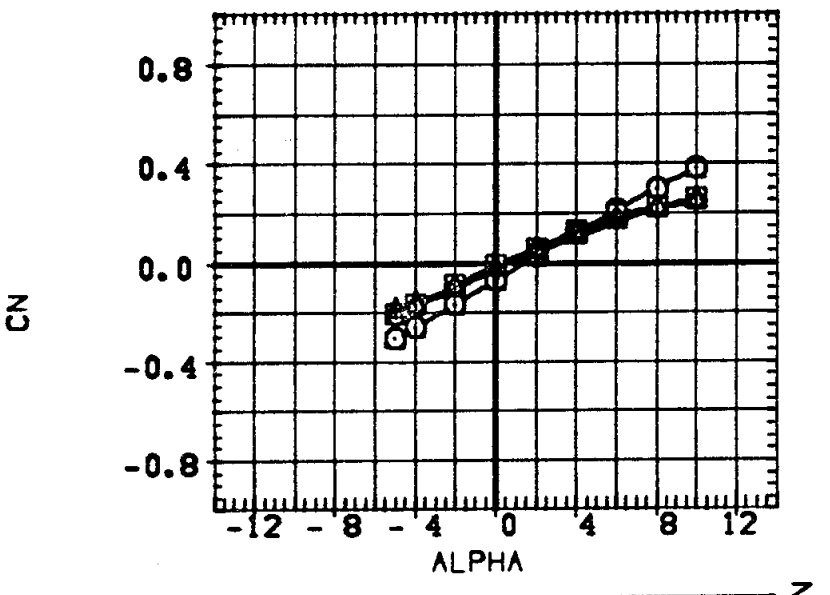


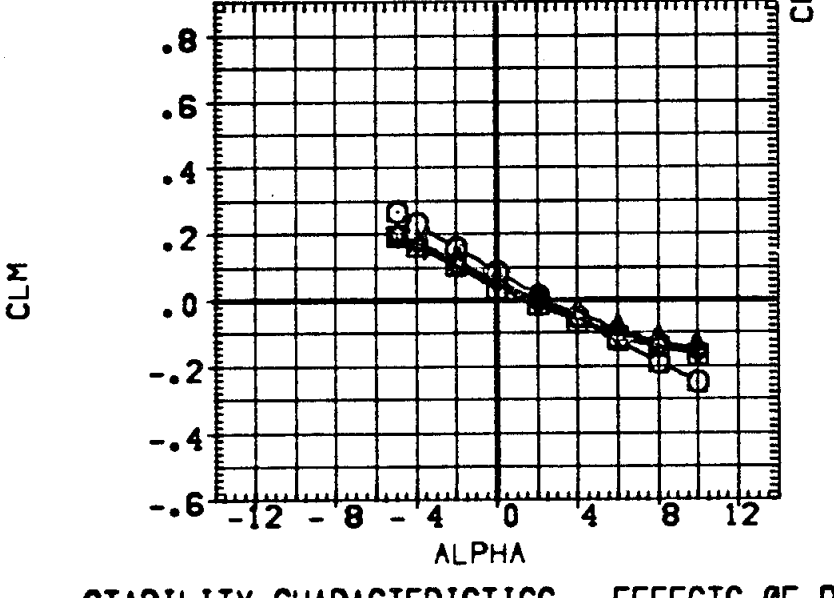
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

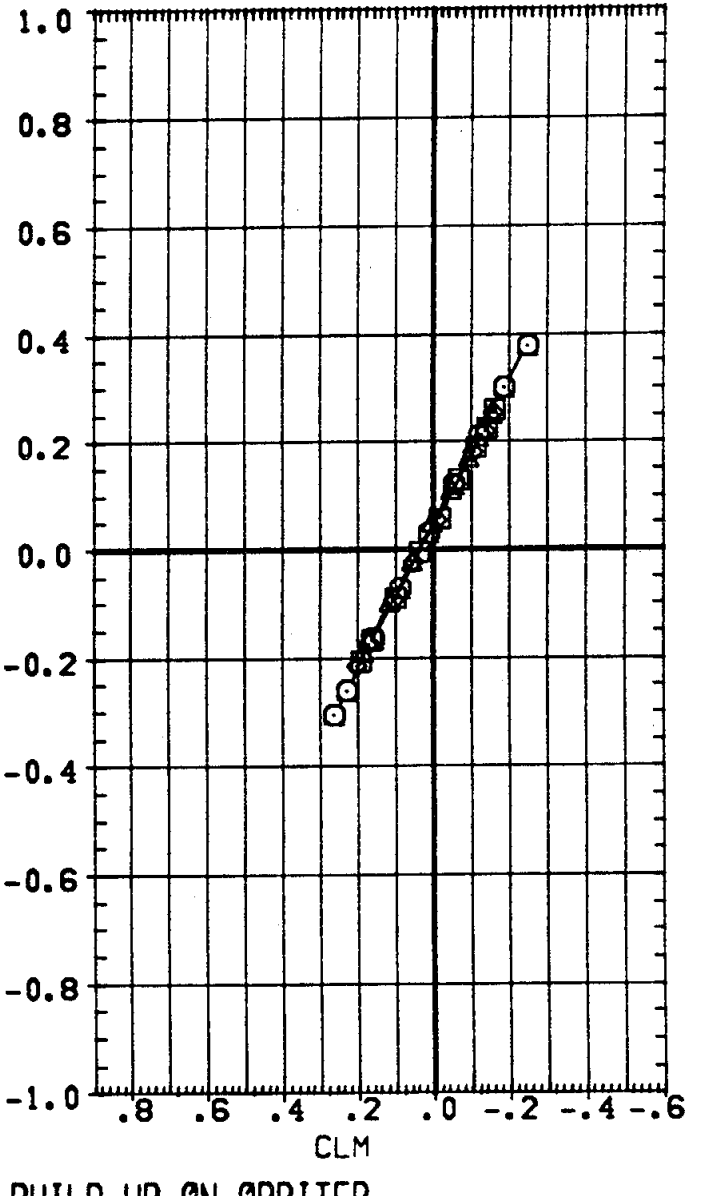
(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72037)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	-1.200	.120	10.000	.000
(A72016)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	.000
(A72501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

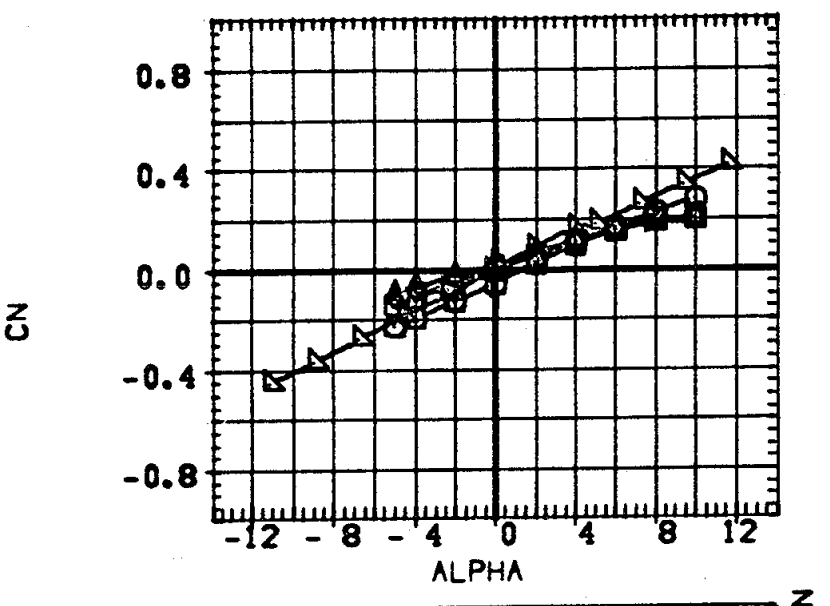
(F)MACH = 1.46

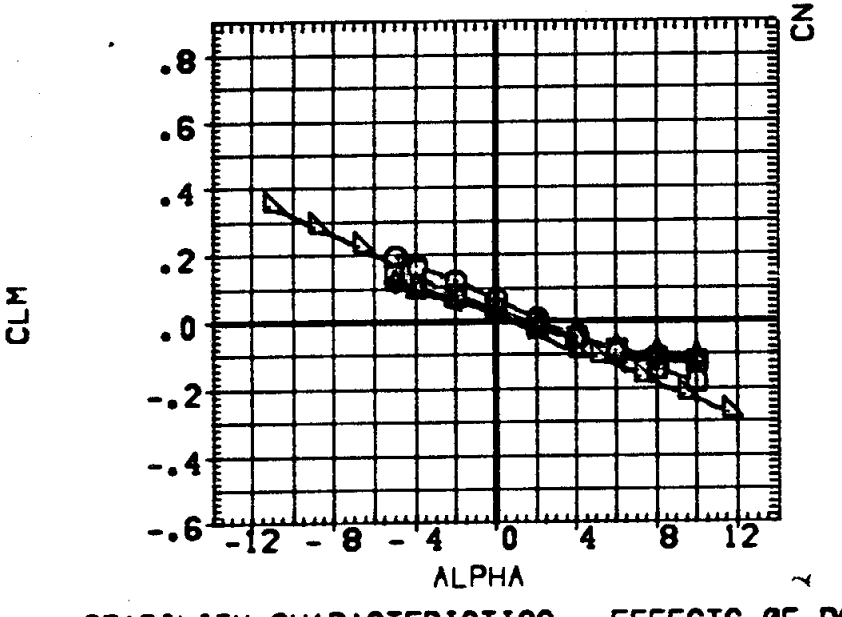
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72009)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72037)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(A72016)		HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)		HSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

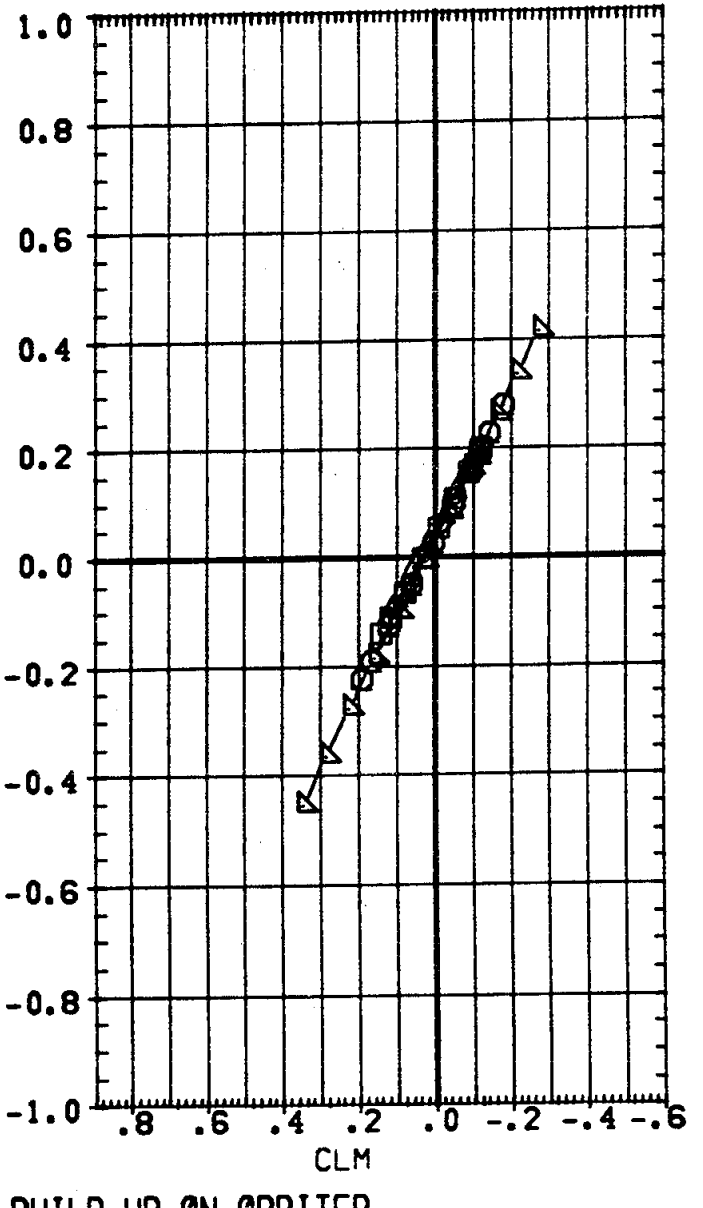
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







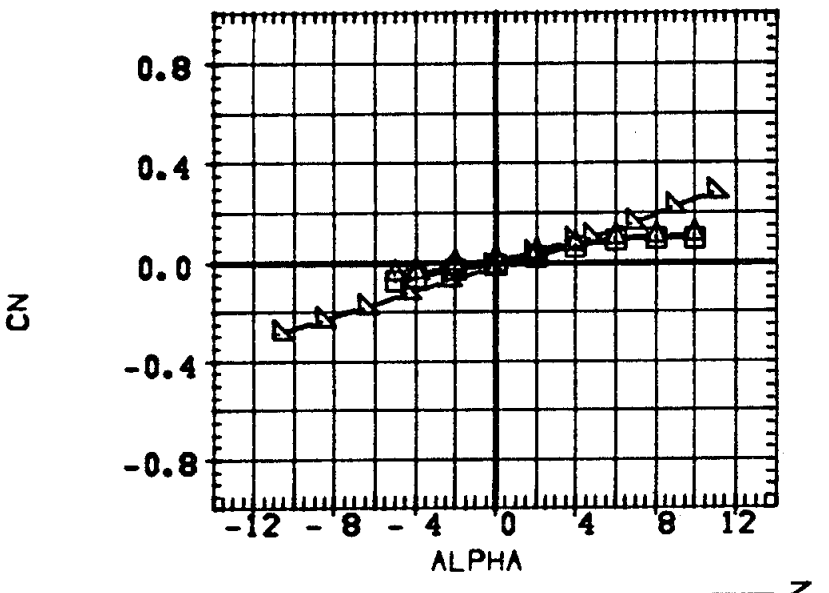
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

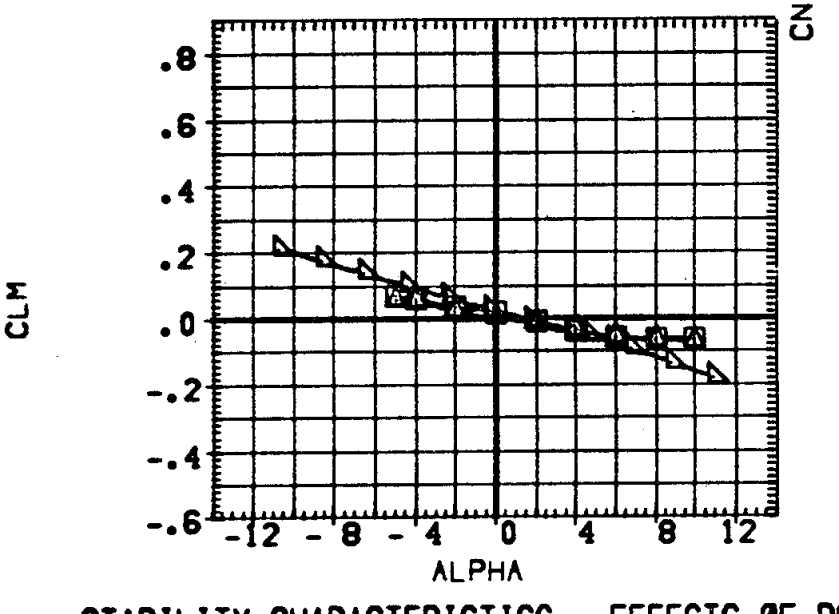
(G)MACH = 1.95

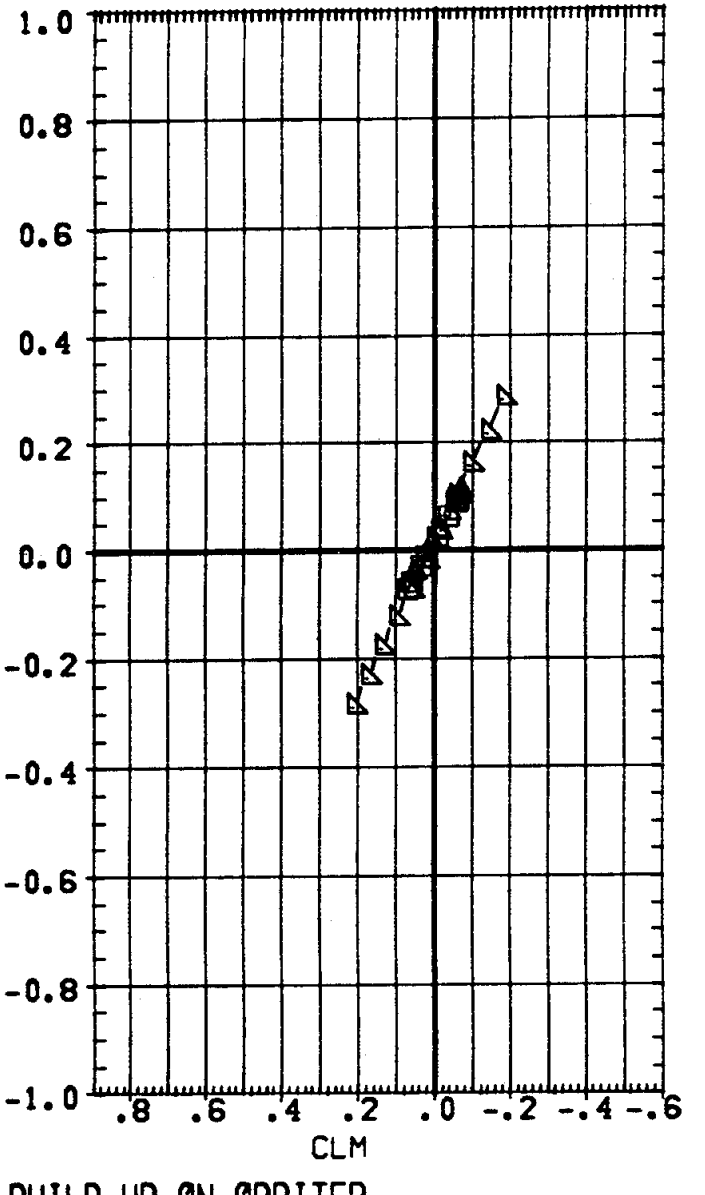
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	DATA NOT AVAILABLE
(A72006)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72037)	◇	DATA NOT AVAILABLE
(A72018)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	▽	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







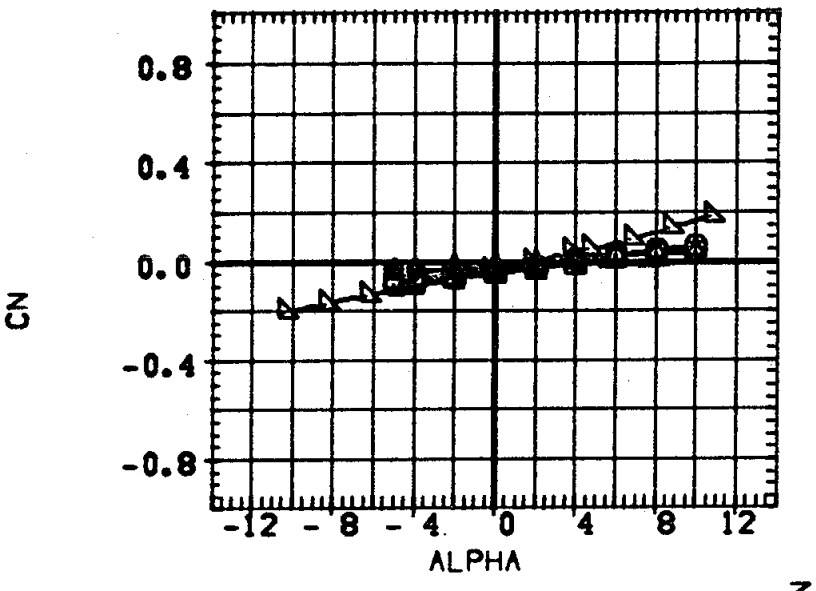
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

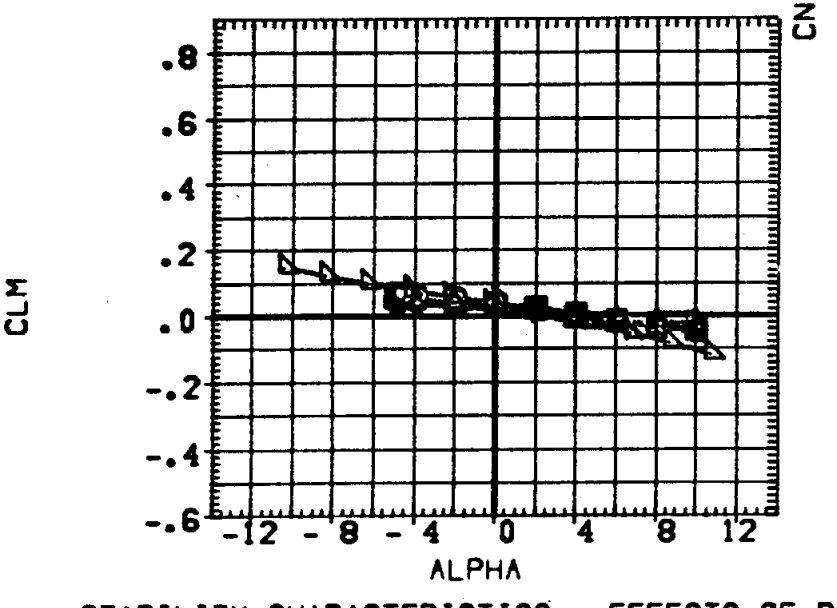
(H)MACH = 2.99

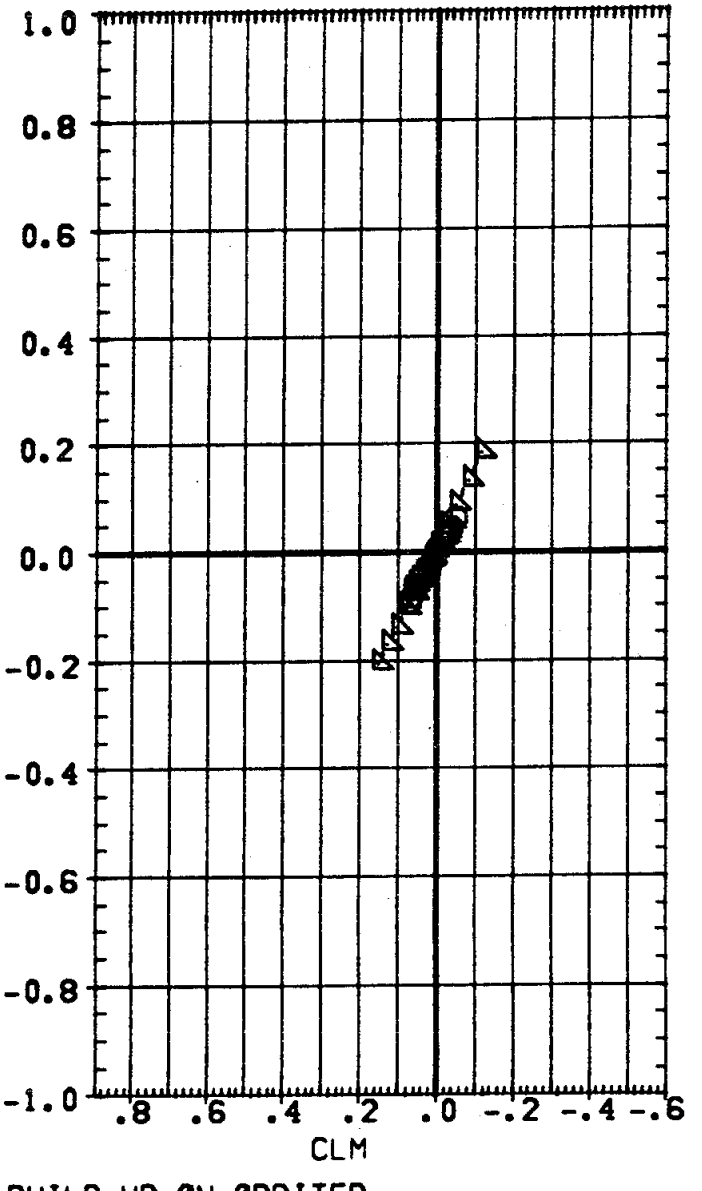
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2002)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)	-1.200	.120	10.000	
(AP2009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)	-1.200	.120	10.000	.000
(AP2037)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1/2)/(S1/2)	-1.200	.120	10.000	.000
(AP2016)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)	-1.200	.120	10.000	.000
(AP2501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3280.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







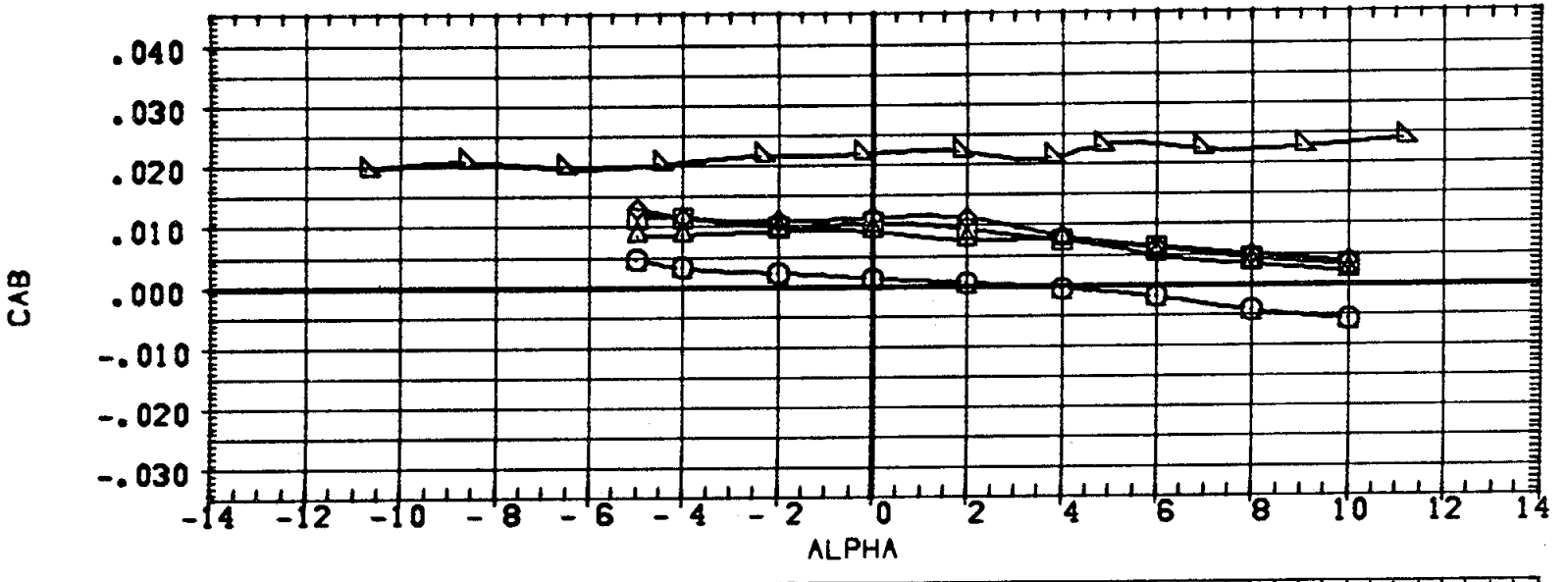
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

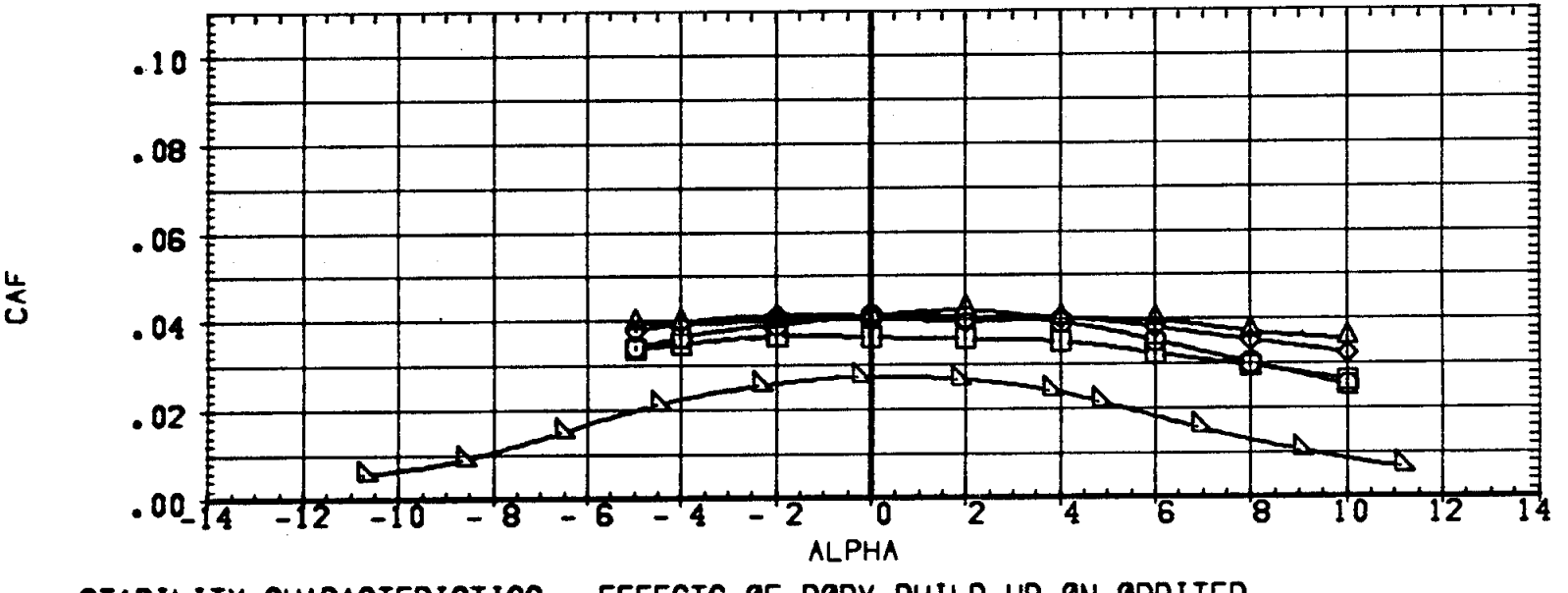
(I)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)		MSFC 545 (IA1) MOD ATP LV-(O6)/(T3)	-1.200	.120	10.000	
(A72009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72037)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	-1.200	.120	10.000	.000
(A72016)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	.000
(A72501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



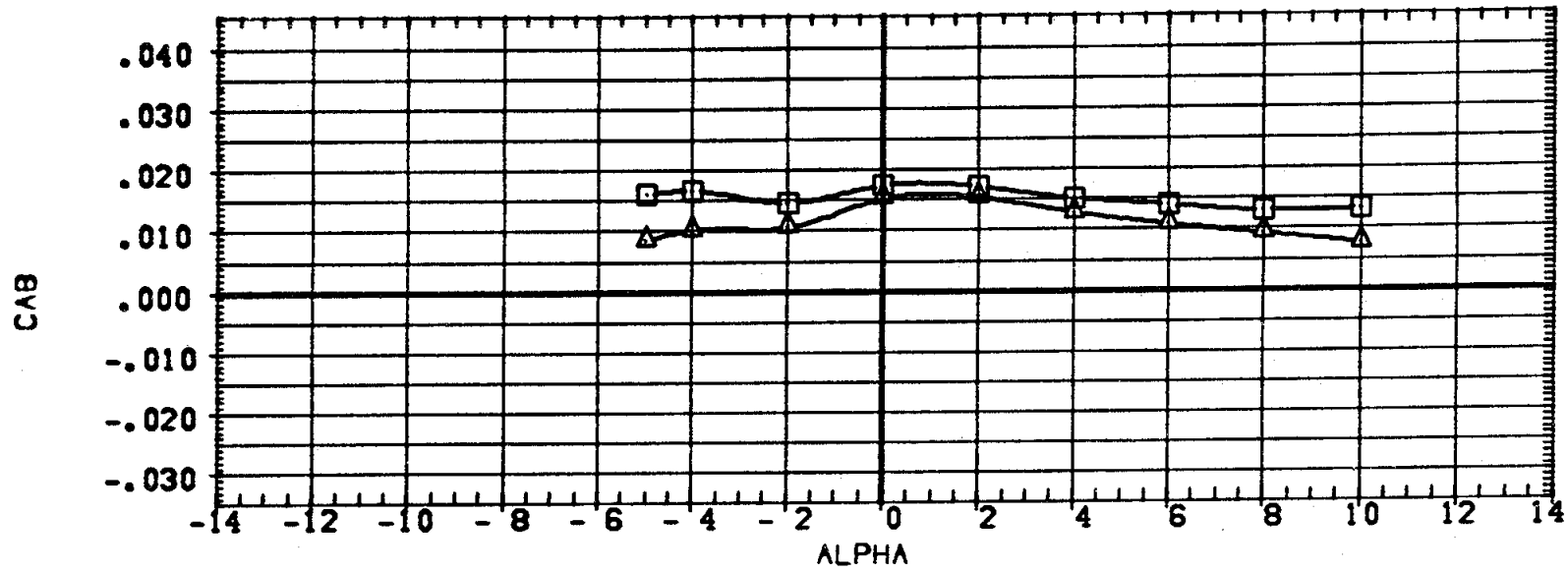


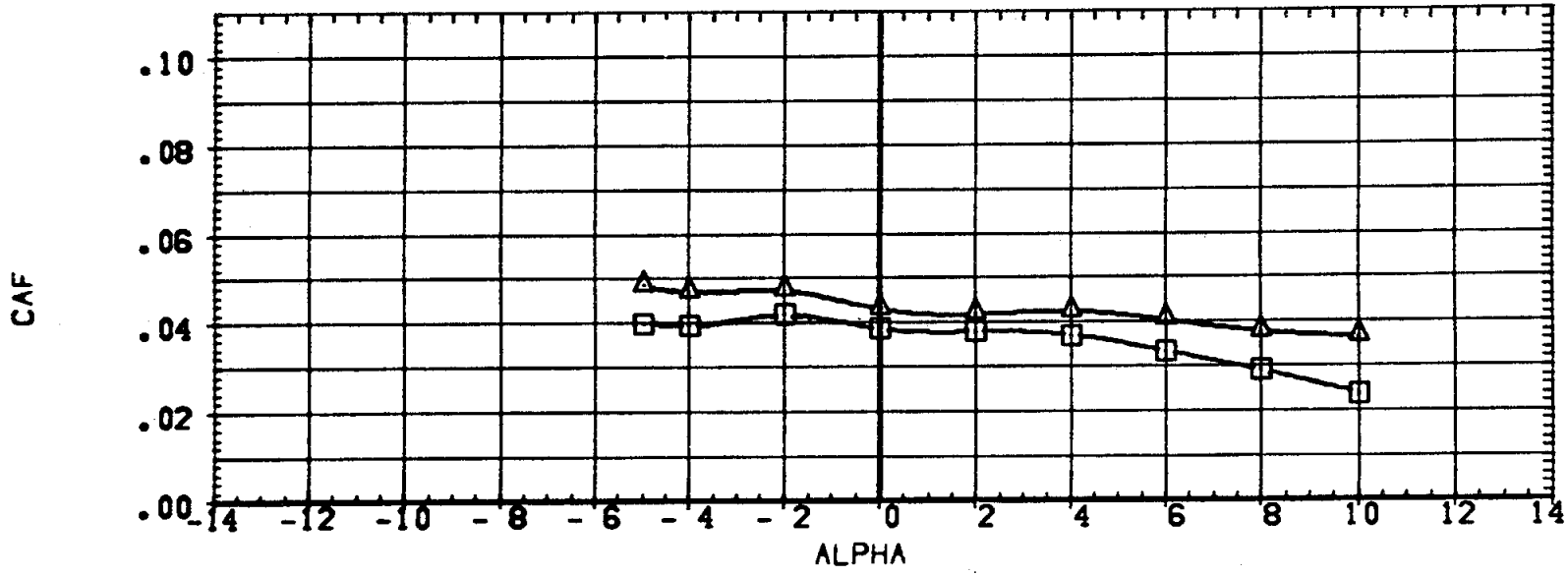
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)		DATA NOT AVAILABLE	-1.200	.120	10.000	
(A72006)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72037)		DATA NOT AVAILABLE	-1.200	.120	10.000	.000
(A72016)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	.000
(A72501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



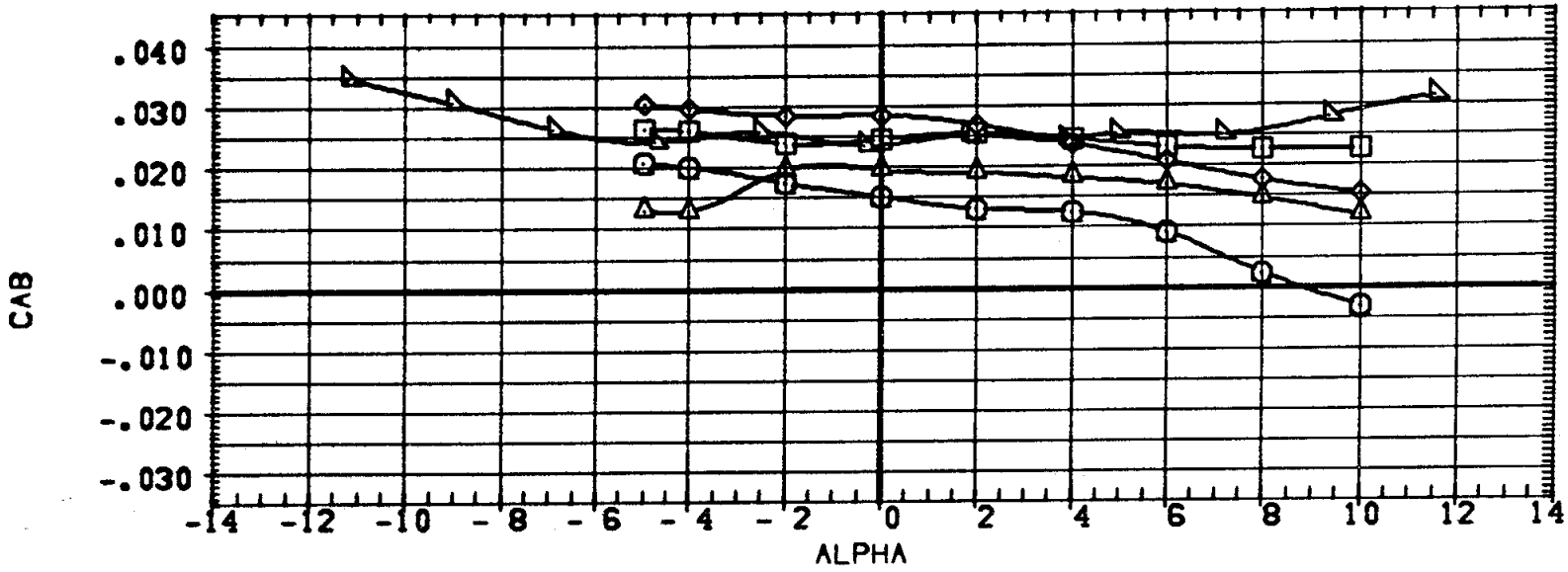


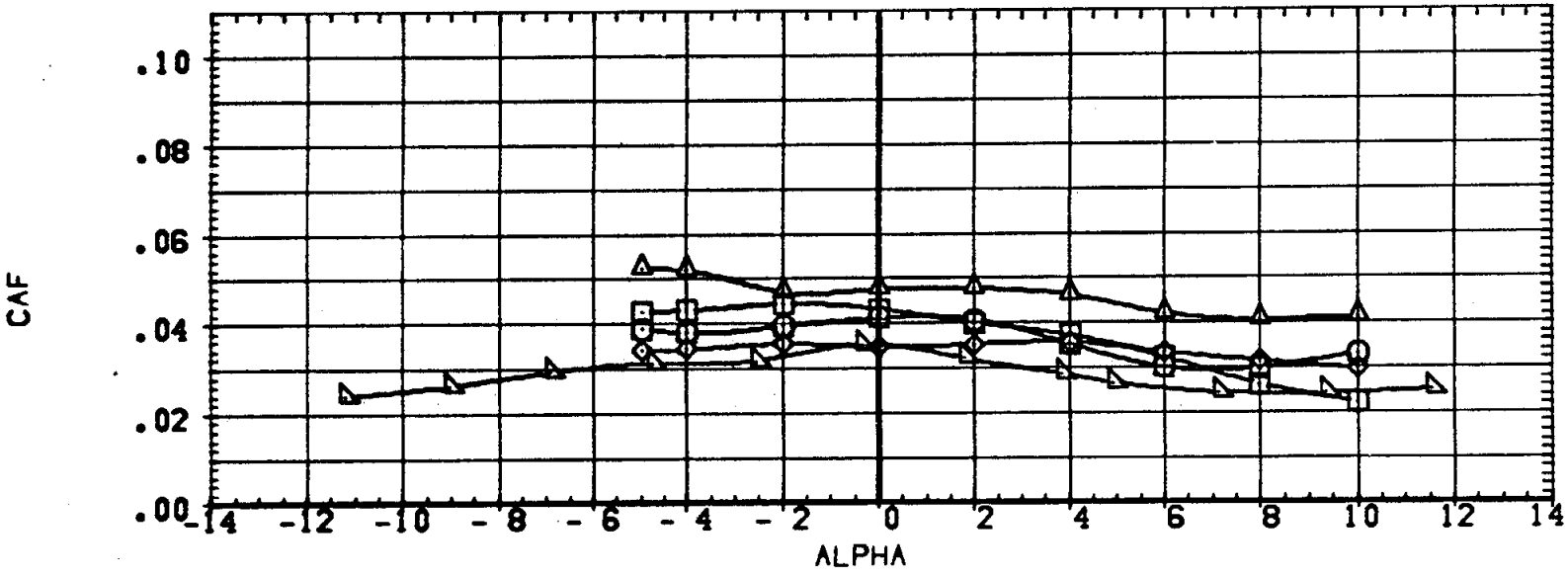
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72037)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	-1.200	.120	10.000	.000
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	.000
(A72501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



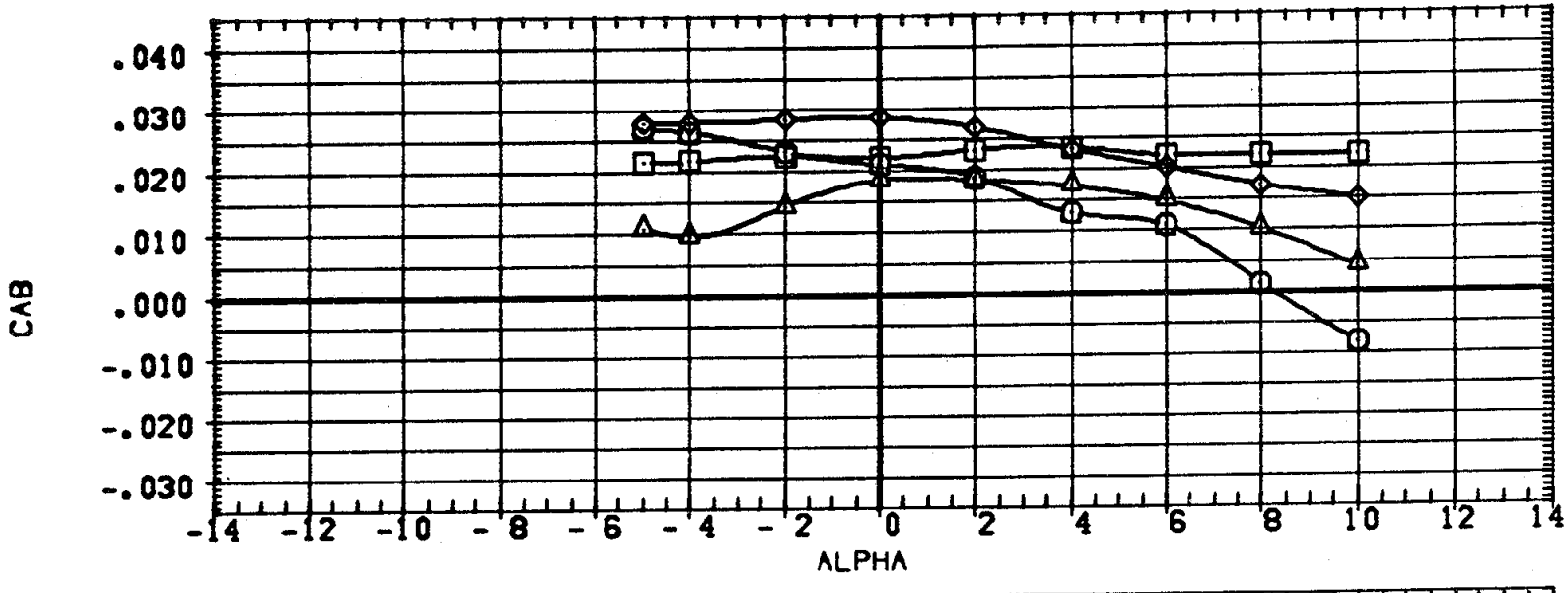


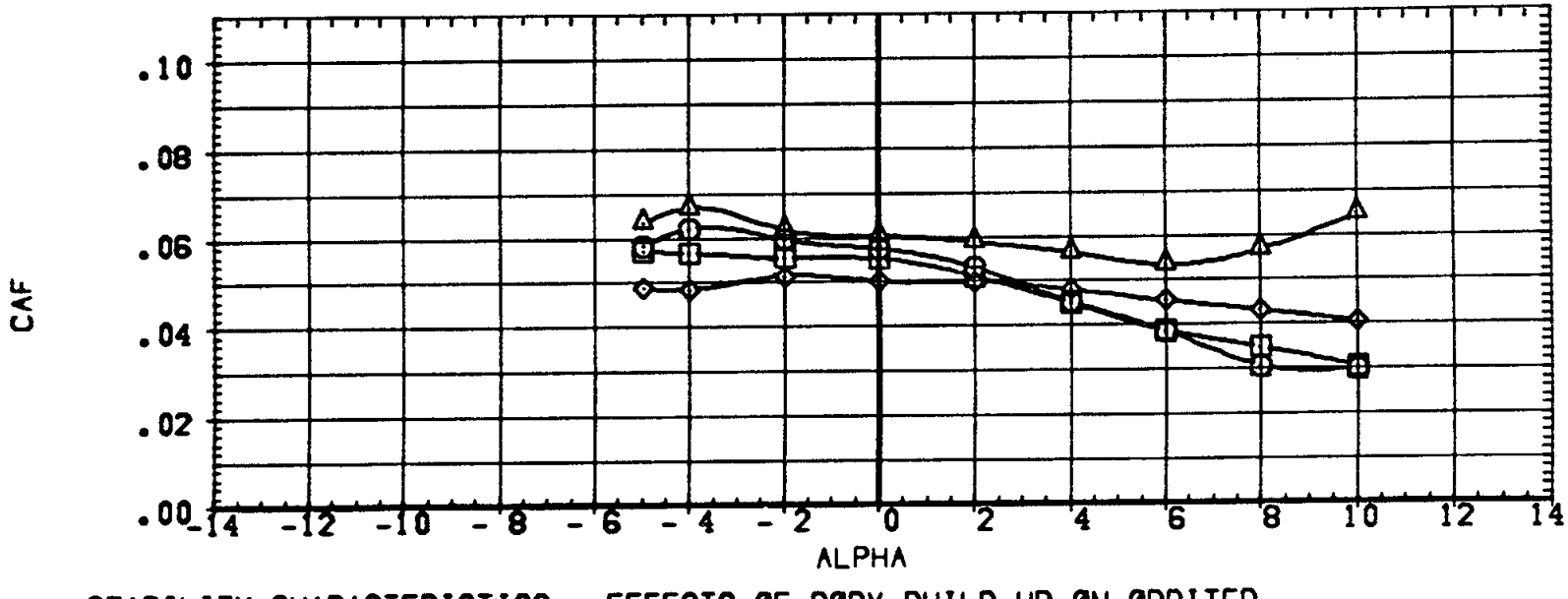
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2002)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(AY2009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(AY2037)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	-1.200	.120	10.000	.000
(AY2016)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	.000
(AY2501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





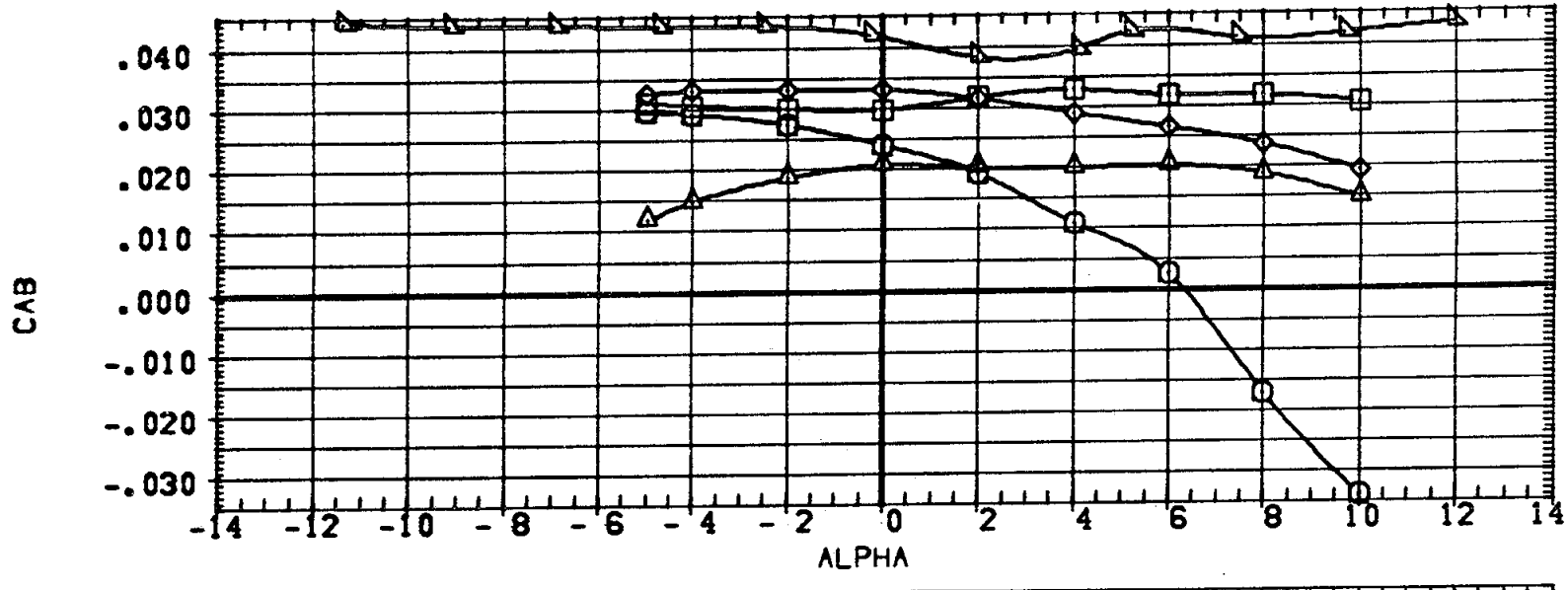
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

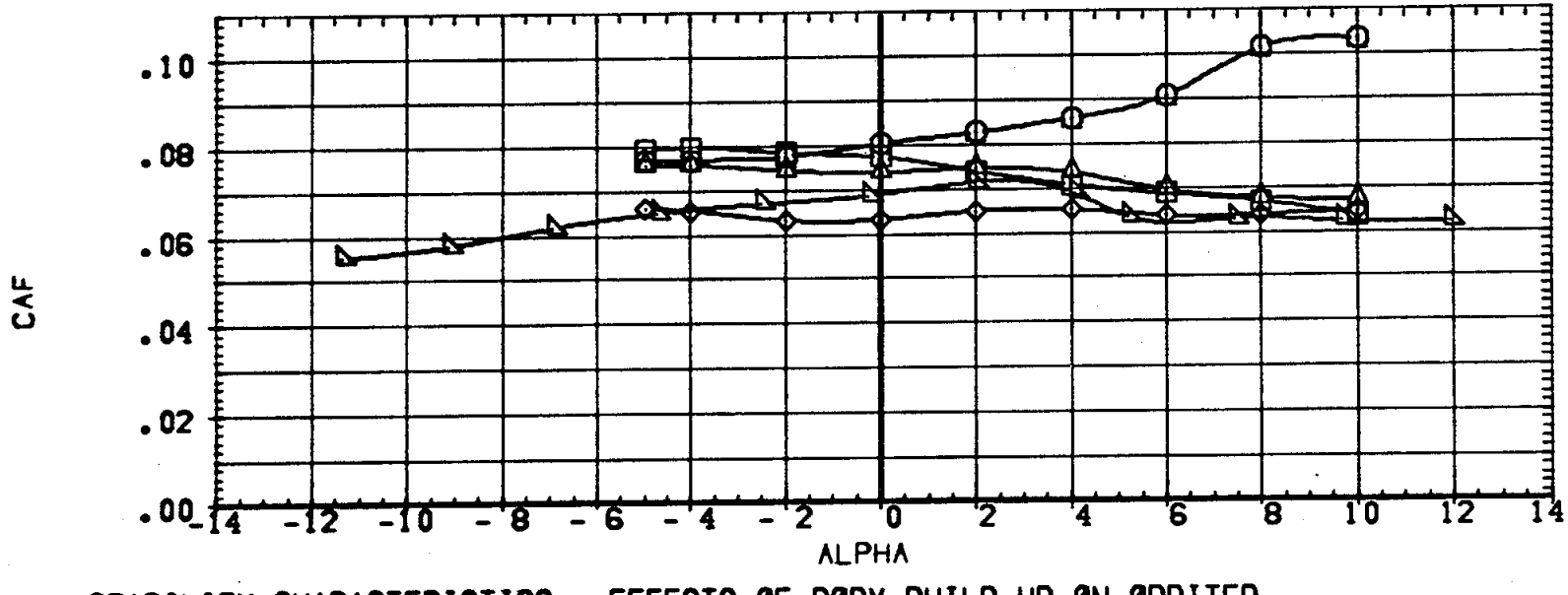
(D)MACH = .99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72006)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(B1)	-1.200	.120	10.000	.000
(A72037)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(B1/2)/(B1/2)	-1.200	.120	10.000	.000
(A72016)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(B1)	-1.200	.120	10.000	.000
(A72501)		MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





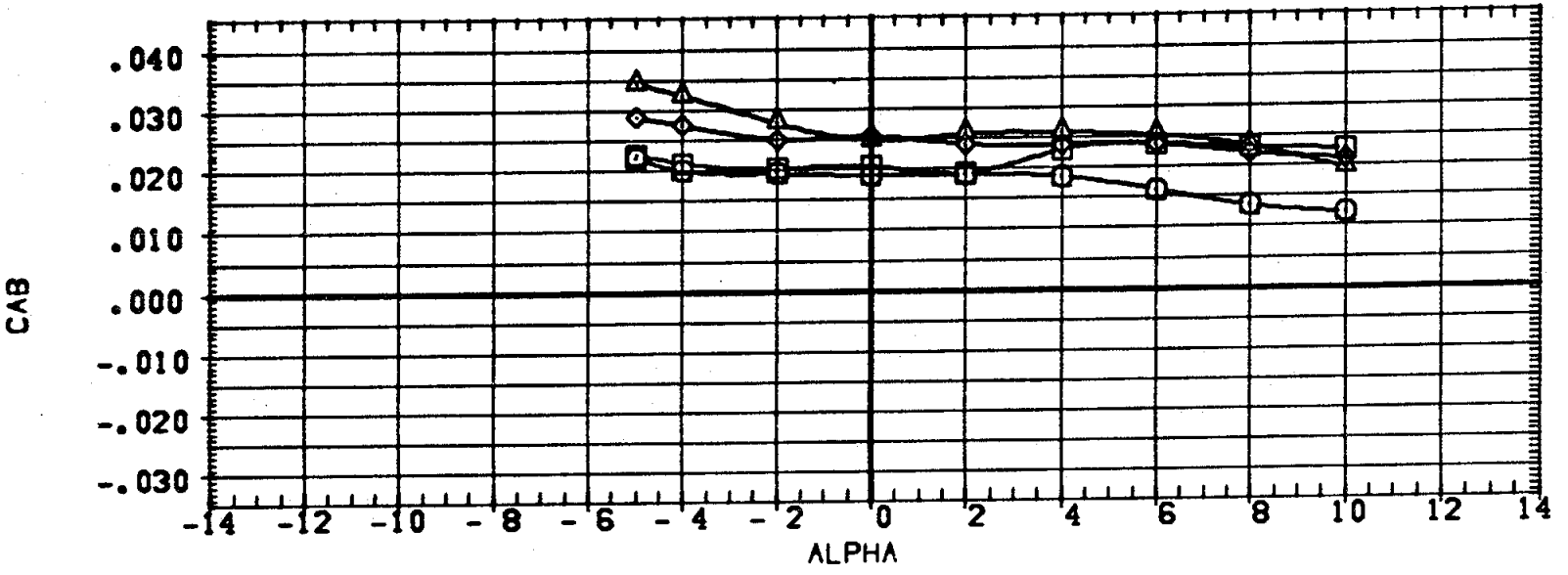
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

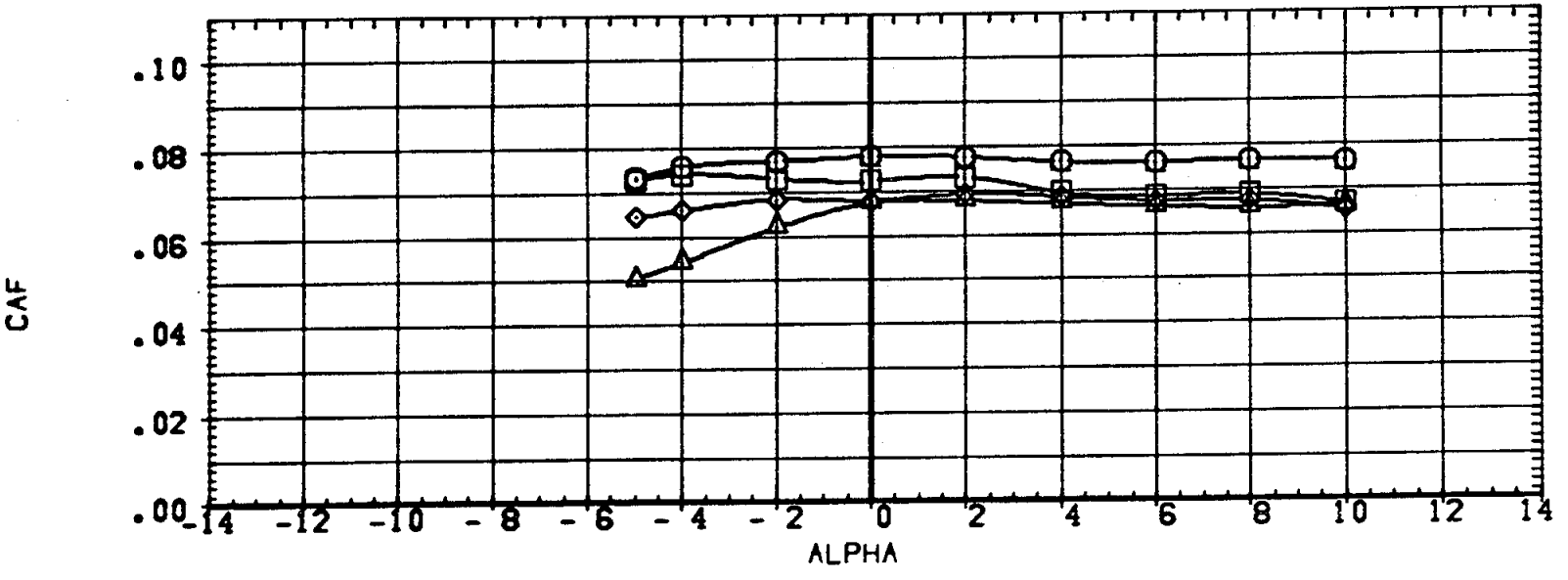
(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)	○	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72009)	◇	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72037)	□	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	-1.200	.120	10.000	.000
(A72016)	▽	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	.000
(A72501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



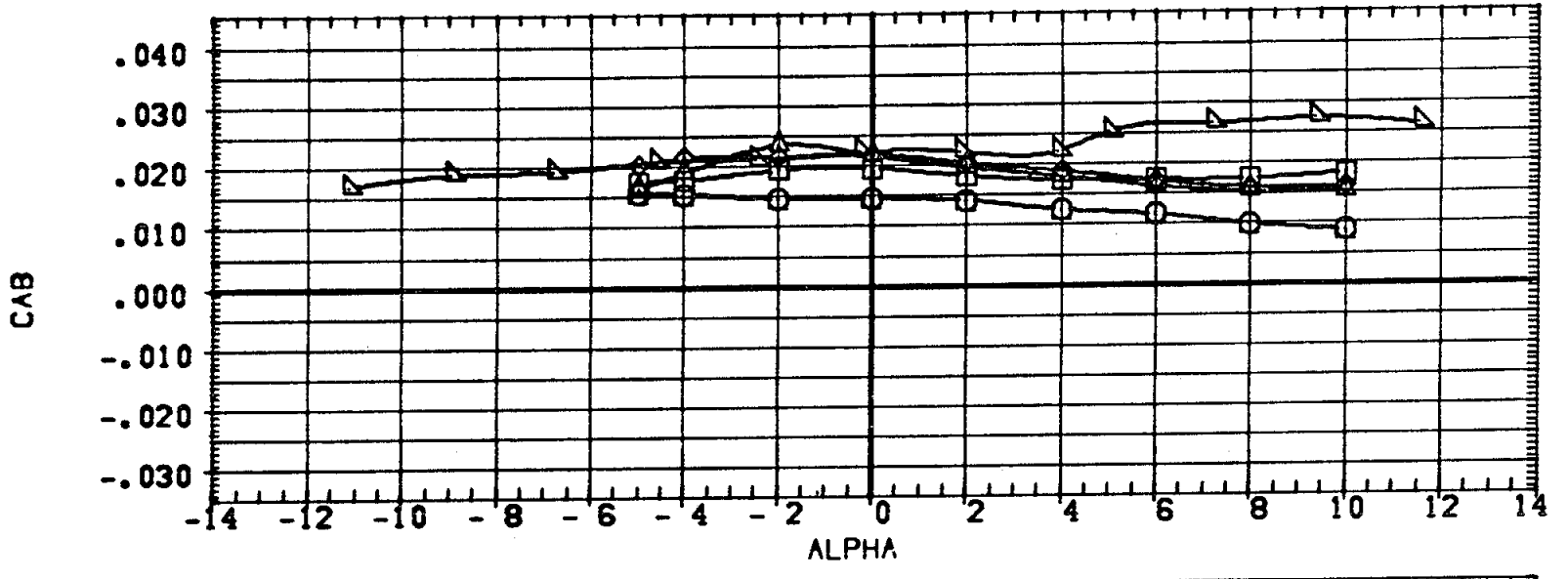


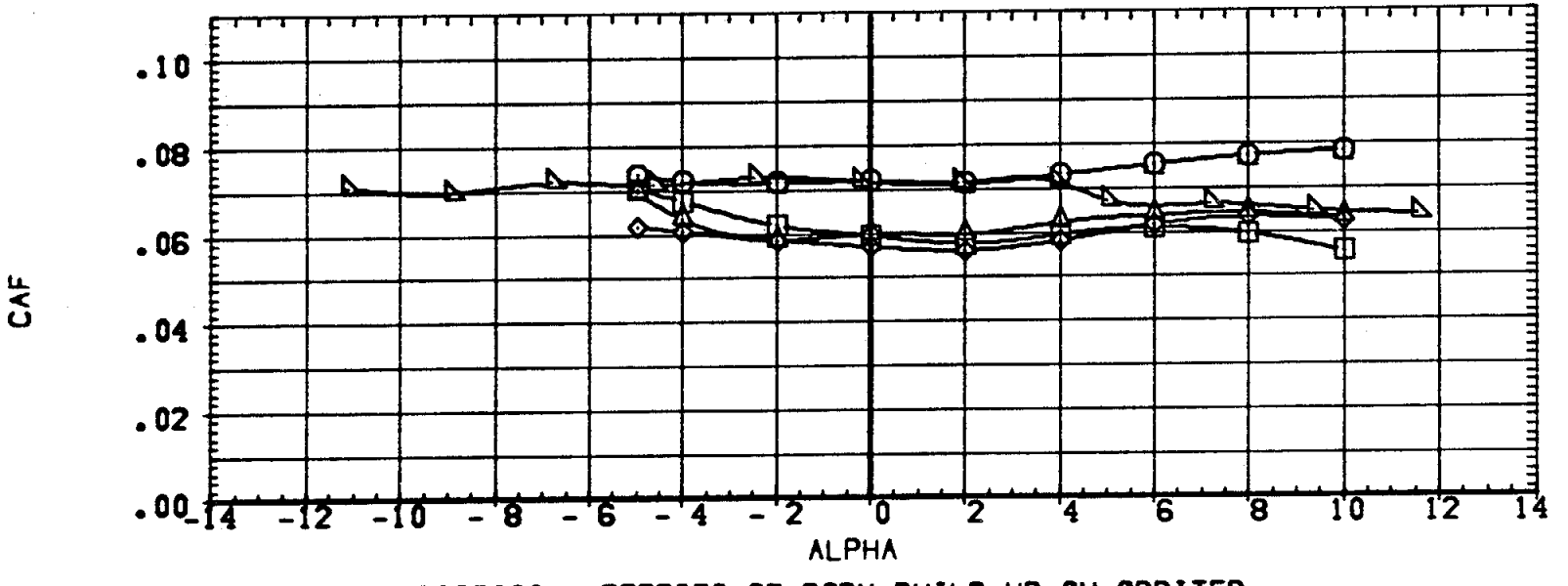
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)		MSFC S45 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72009)		MSFC S45 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(A72037)		MSFC S45 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	-1.200	.120	10.000	.000
(A72016)		MSFC S45 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	.000
(A72501)		MSFC S45 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





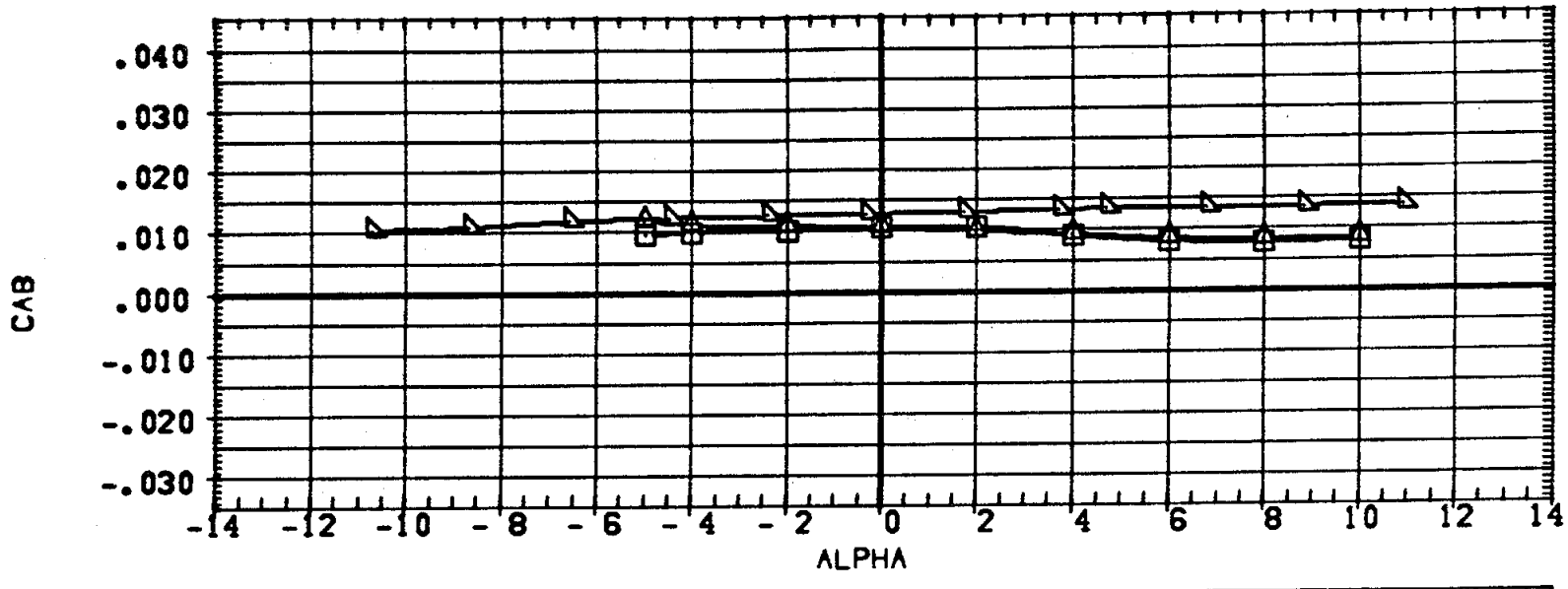
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

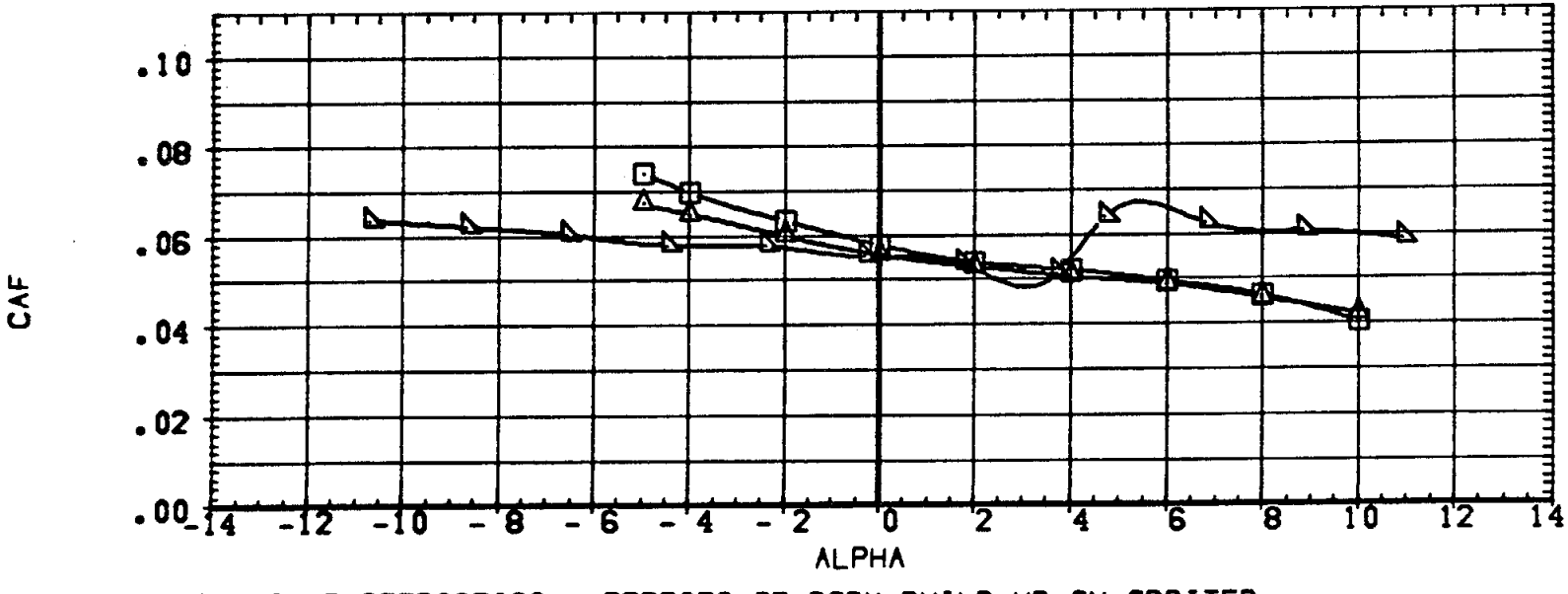
(G)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2002)		DATA NOT AVAILABLE
(AP2009)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)
(AP2037)		DATA NOT AVAILABLE
(AP2016)		MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)
(AP2301)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



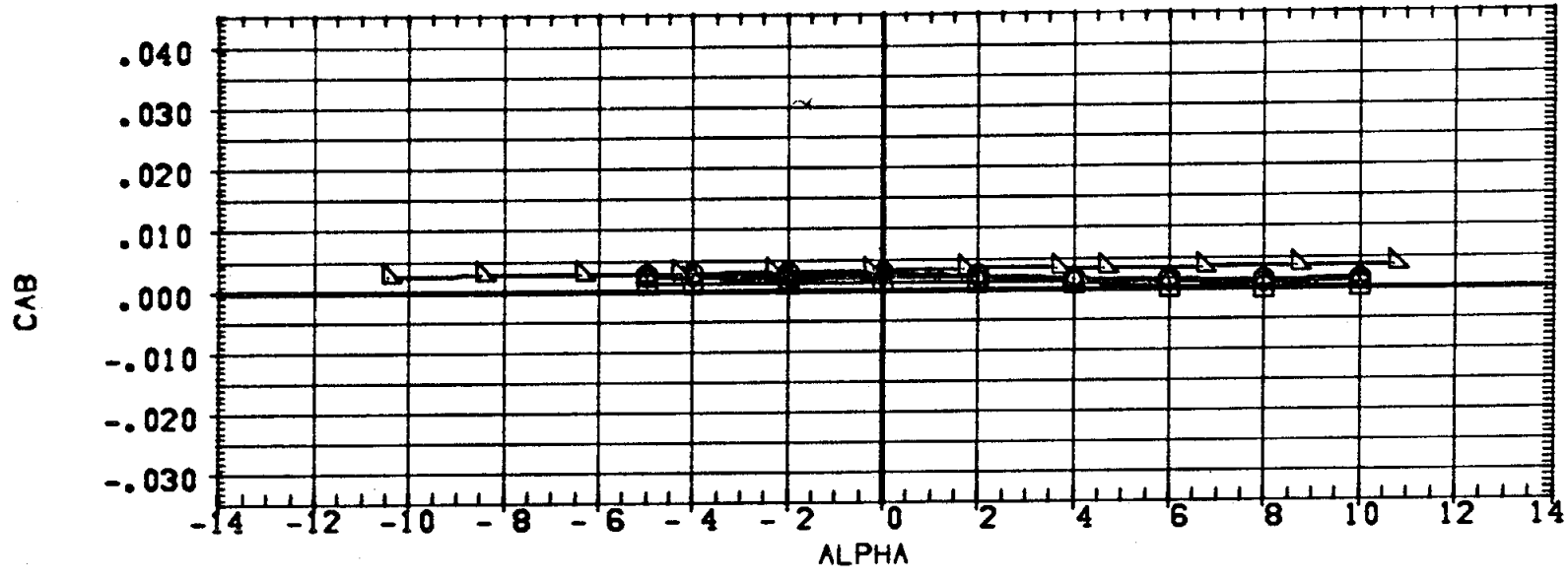


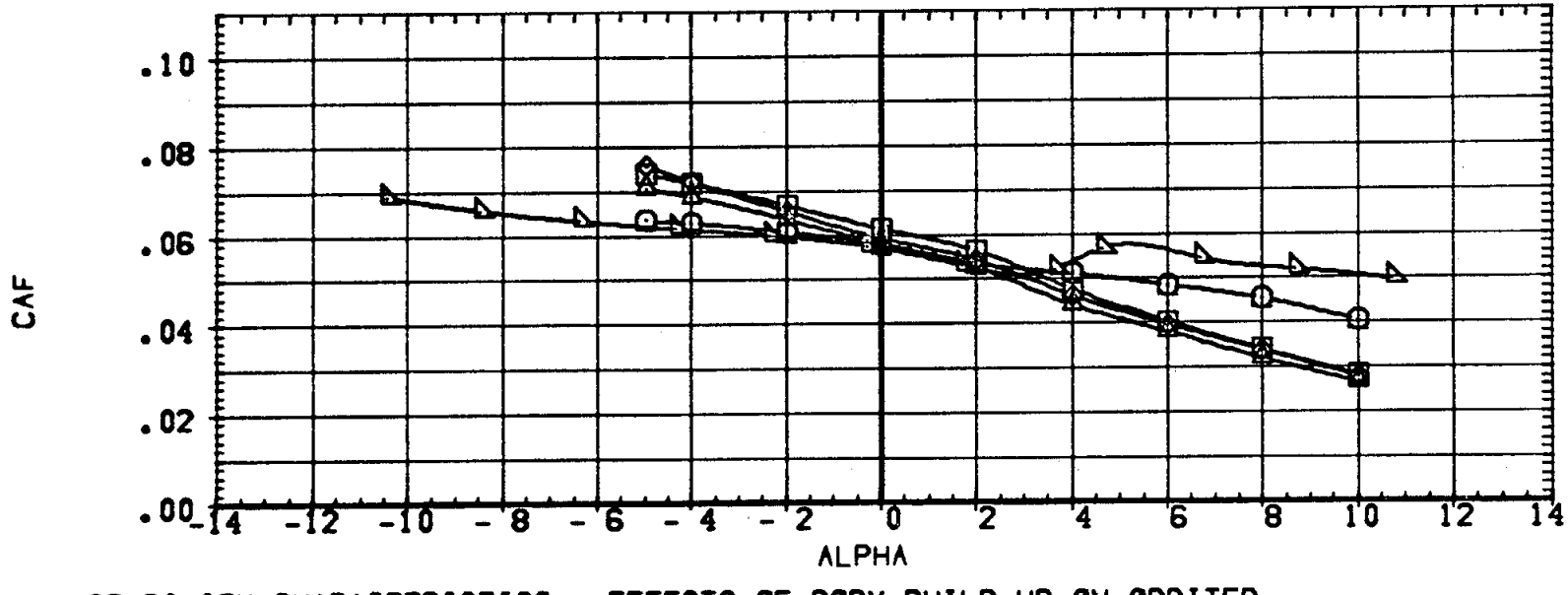
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2002)	○	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(AP2009)	△	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	.000
(AP2037)	□	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	-1.200	.120	10.000	.000
(AP2016)	▽	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	.000
(AP2501)		MSFC S4S (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





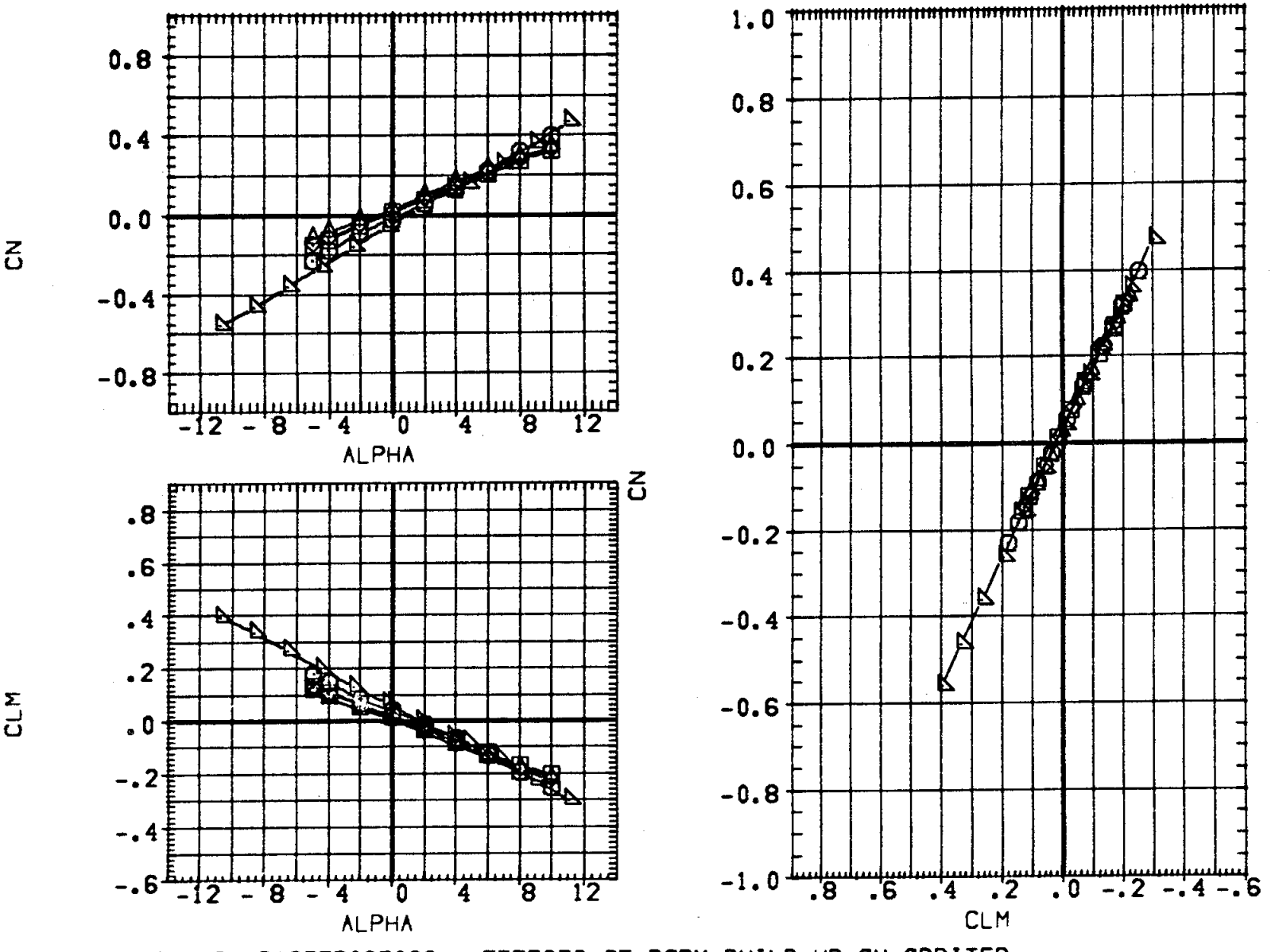
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(I)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)
(A72010)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)
(A72038)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1/2)/(S1/2)
(A72017)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)
(A72901)	▽	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
1.500	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

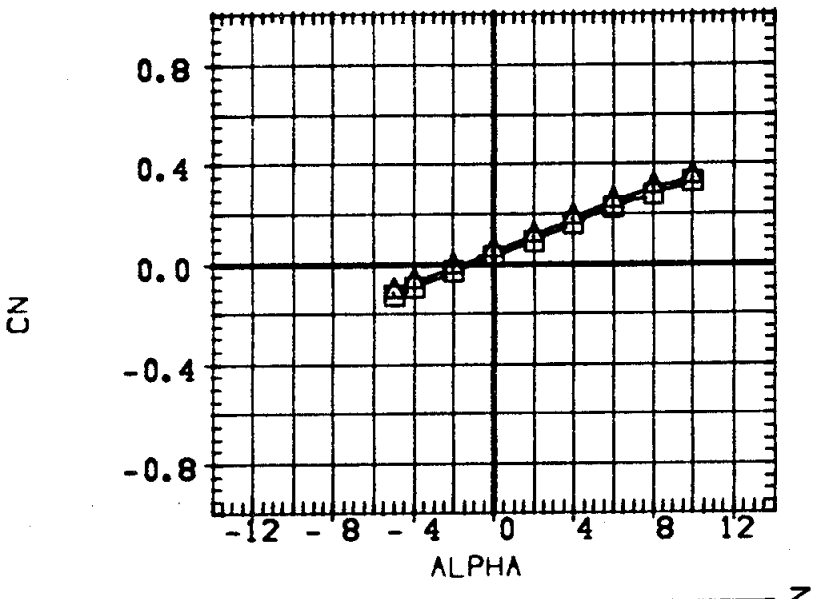
(A)MACH = .60

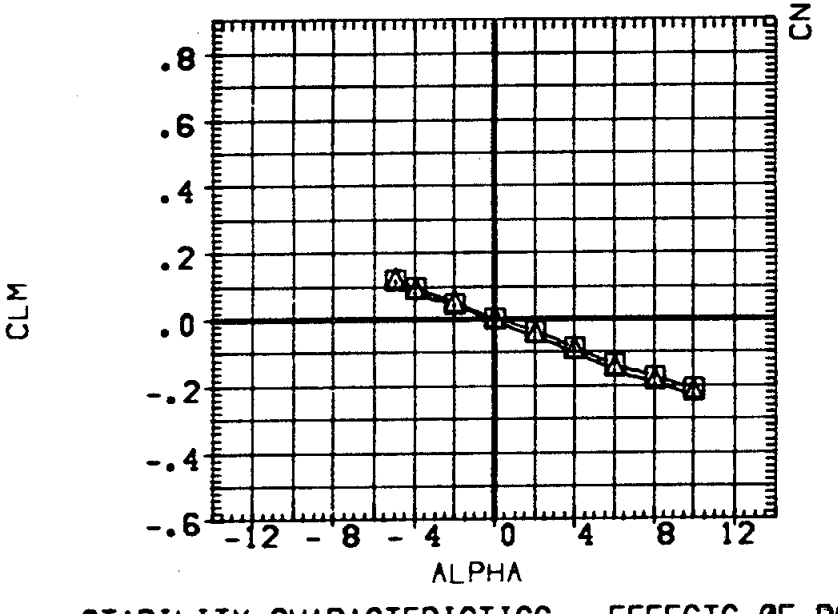
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2003)		DATA NOT AVAILABLE
(AP2010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(AP2038)		DATA NOT AVAILABLE
(AP2017)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(AP2501)		DATA NOT AVAILABLE

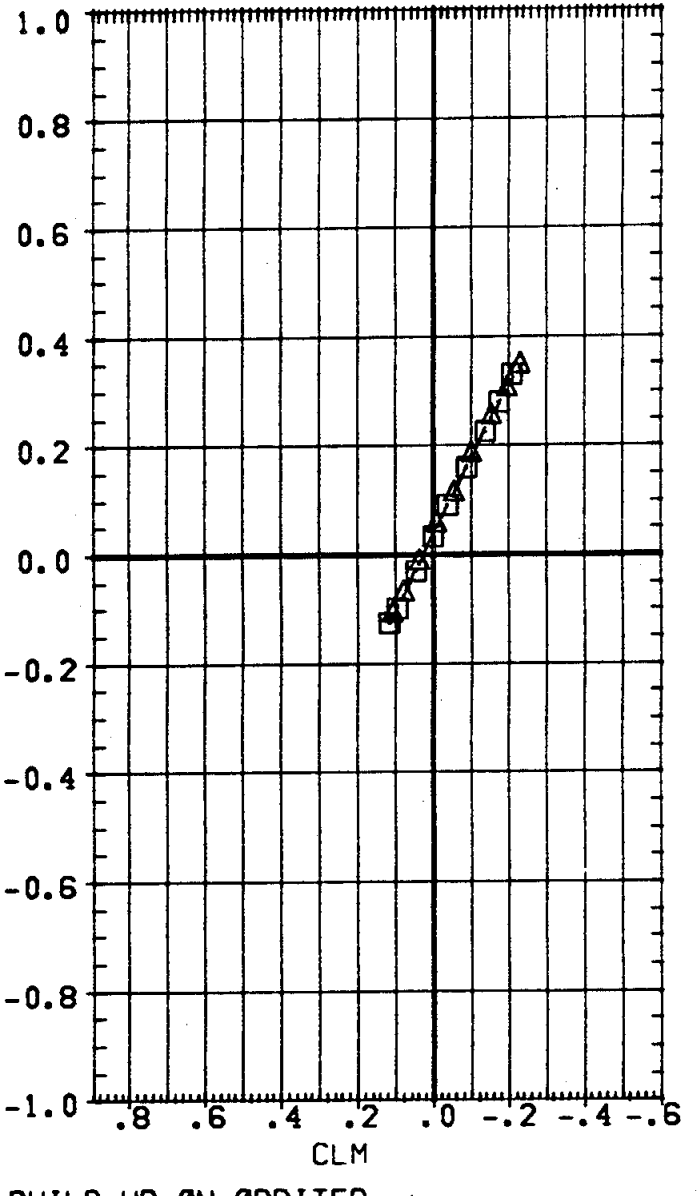
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
1.500	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





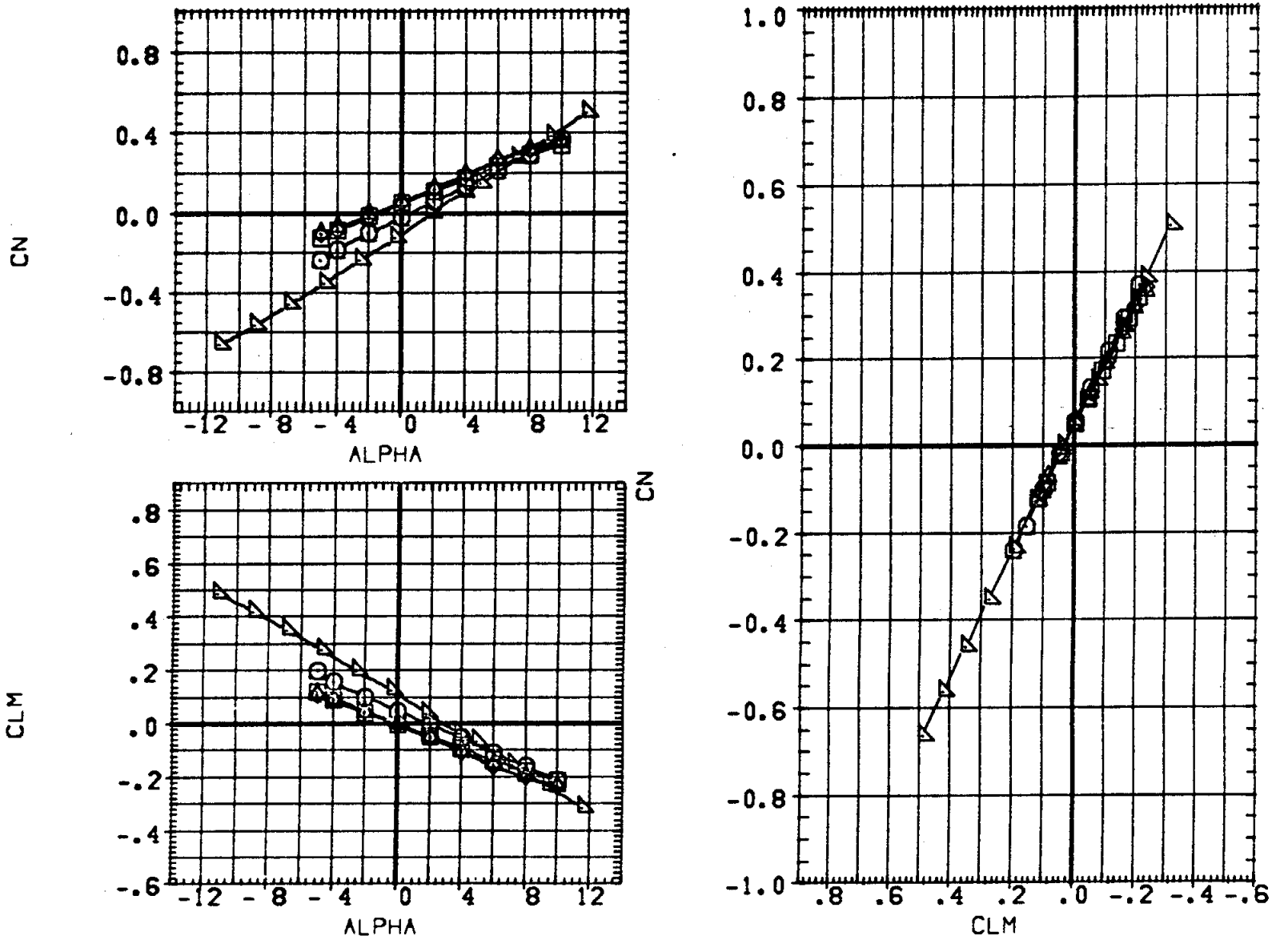


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)	○	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)	△	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72036)	◇	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)	□	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)	▽	MSFC S4S (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

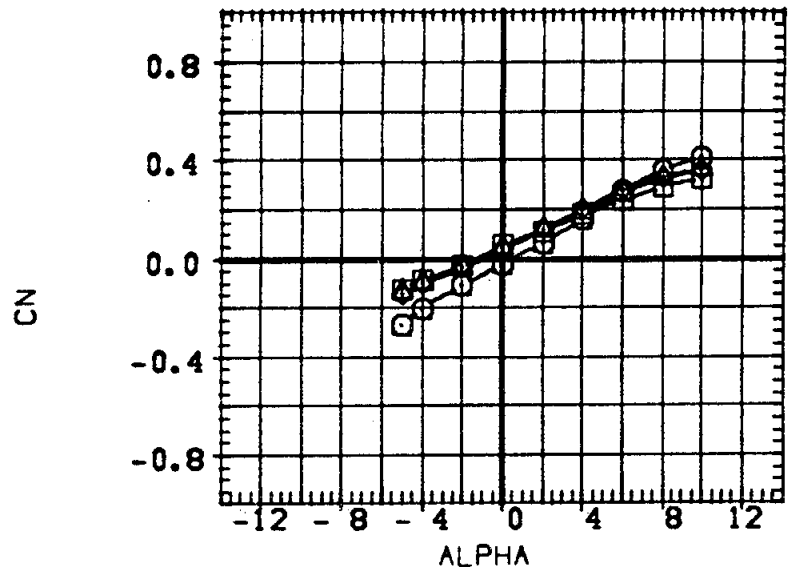


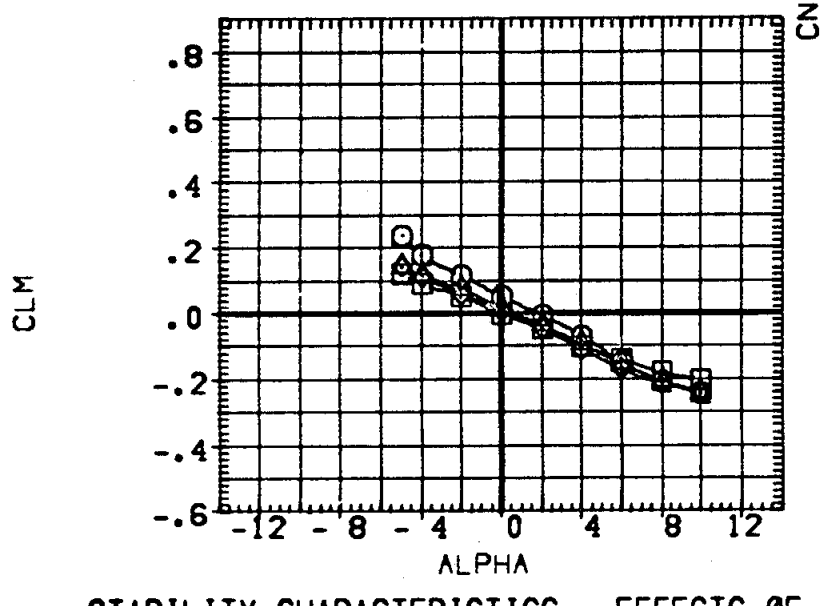
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

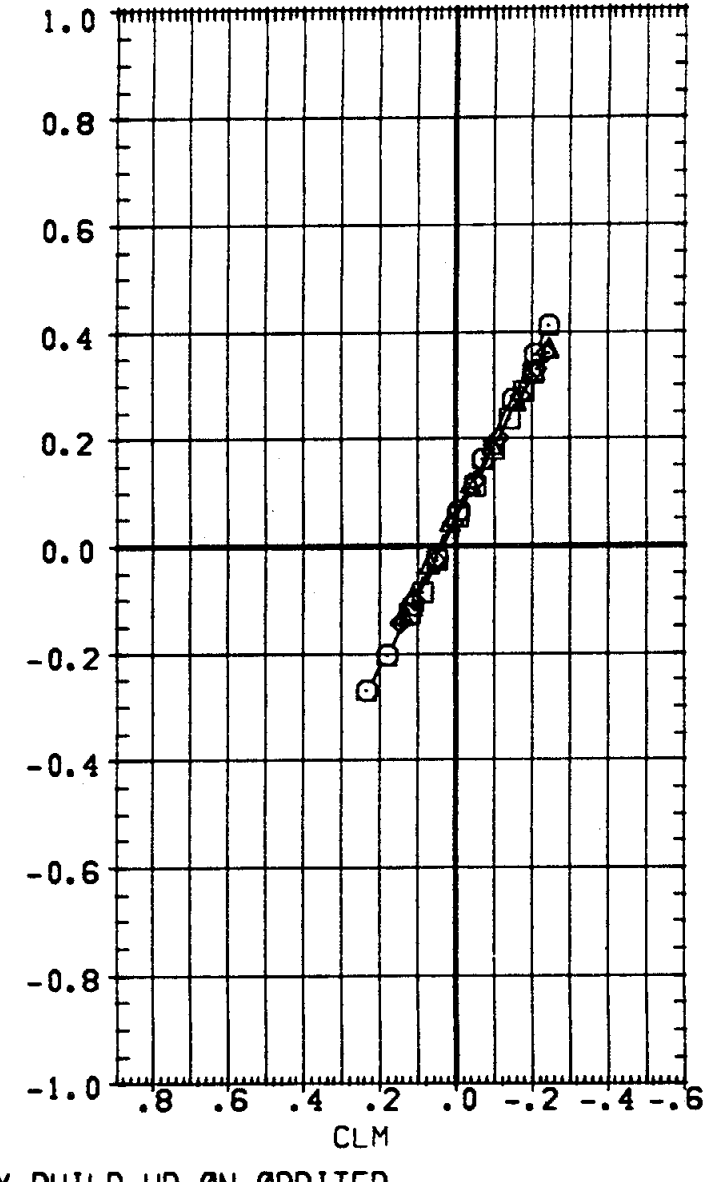
(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72036)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





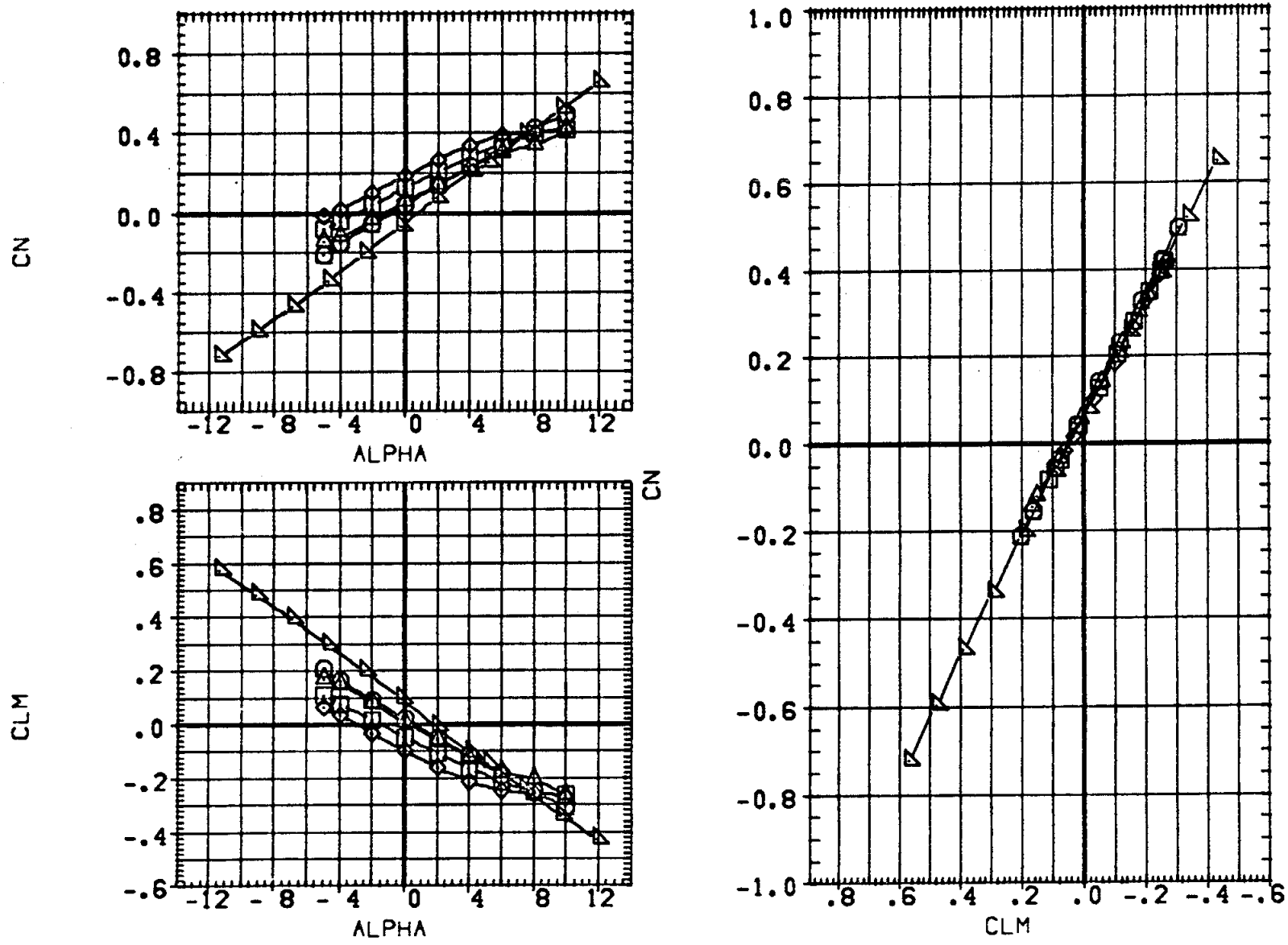


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(D)MACH = .99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72036)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)		MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)		MSFC S4S (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

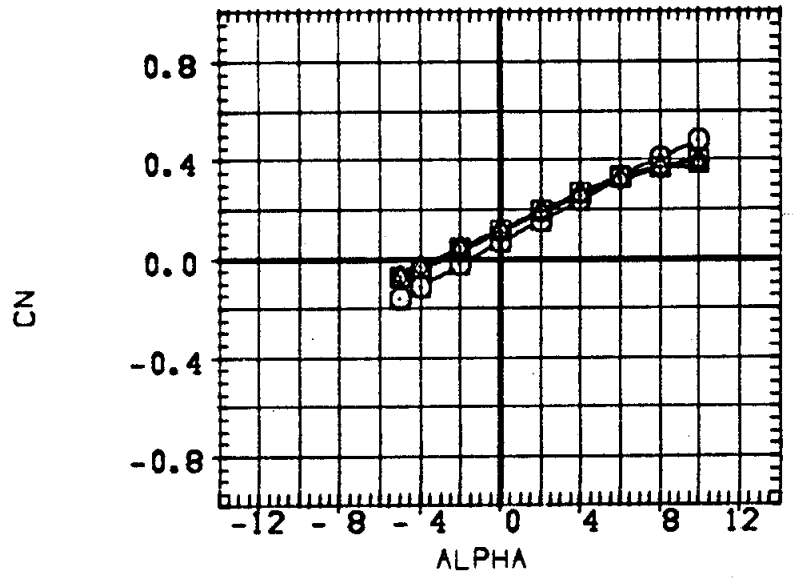
(E)MACH = 1.19

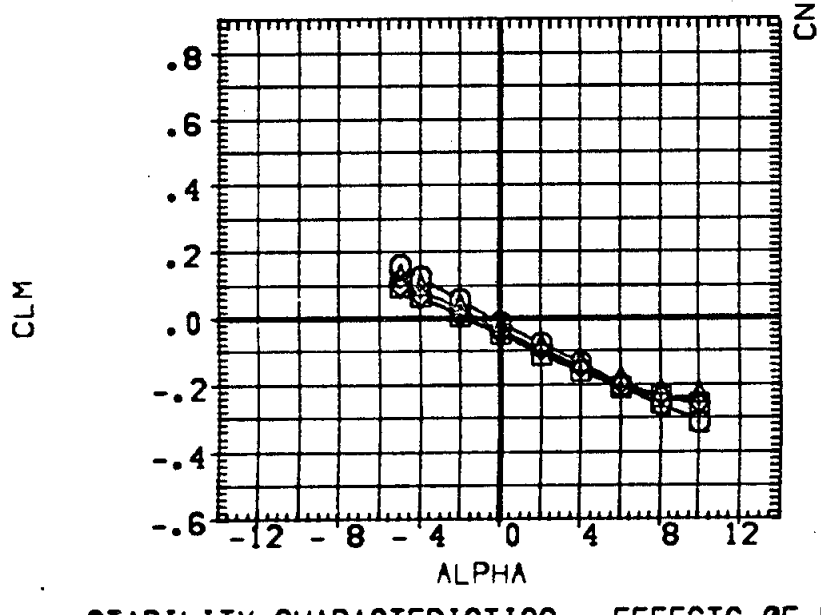
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72010)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72036)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(A72017)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	▽	DATA NOT AVAILABLE

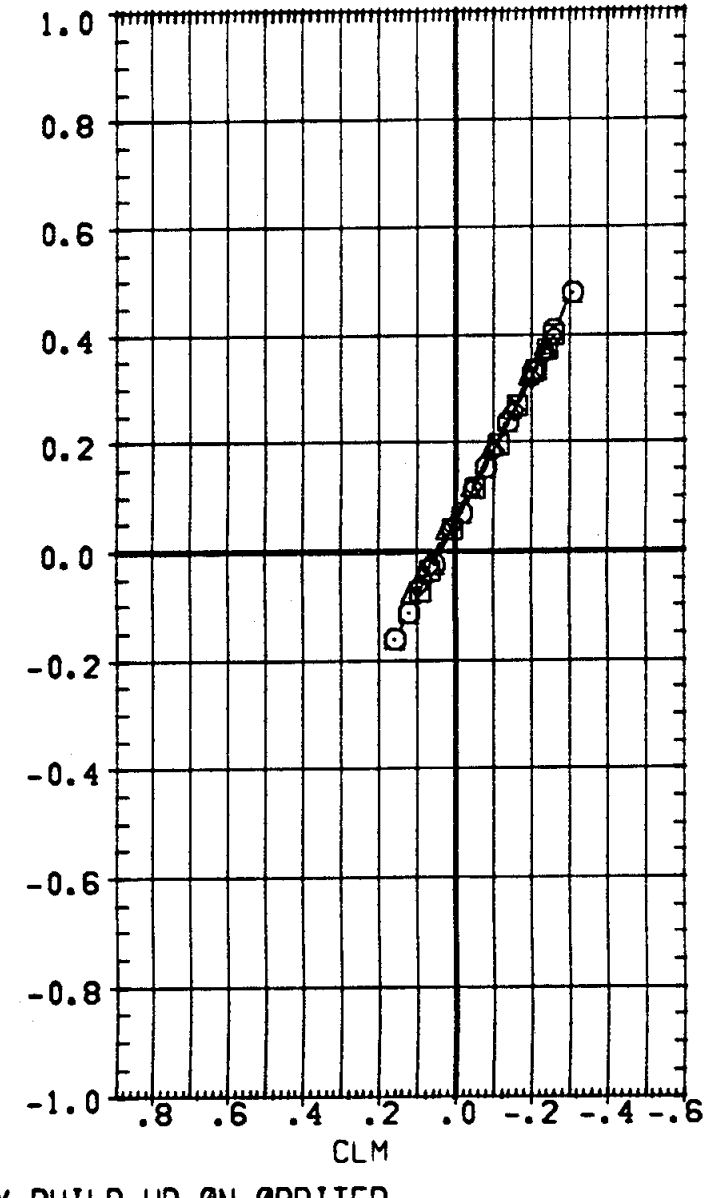
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
1.500	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







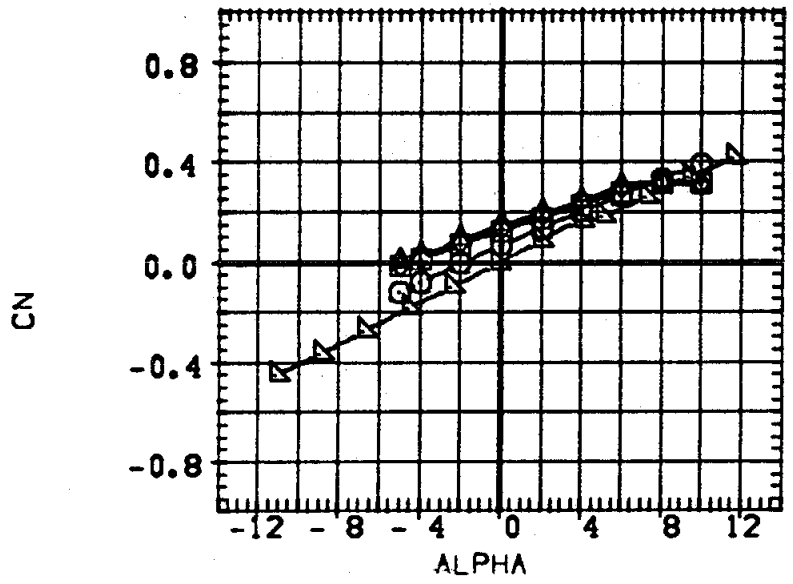
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

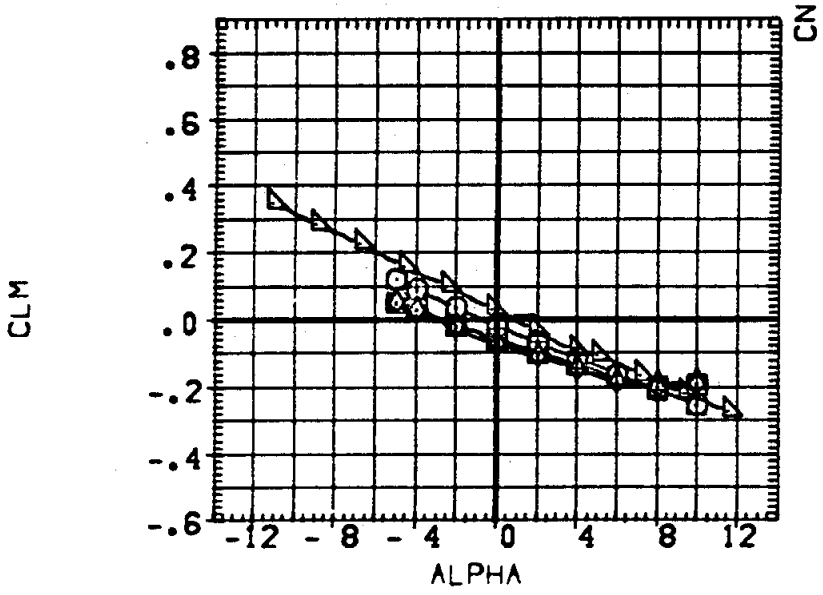
(F)MACH = 1.46

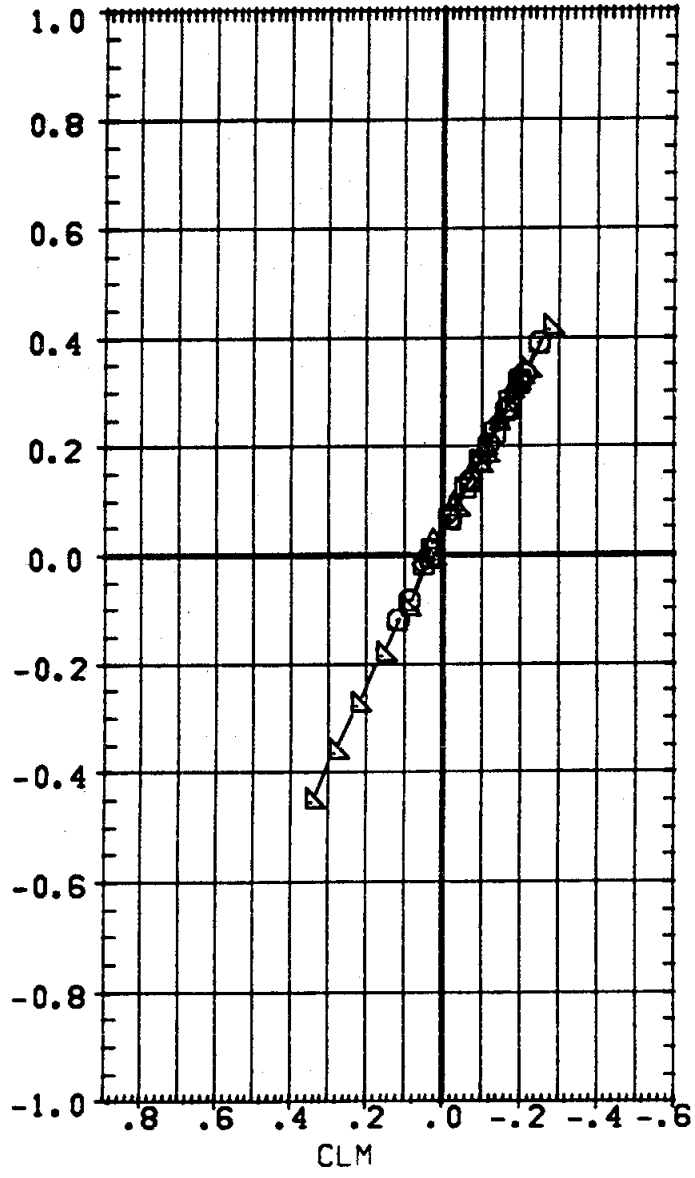
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72010)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72036)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(A72017)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	▽	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
1.500	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







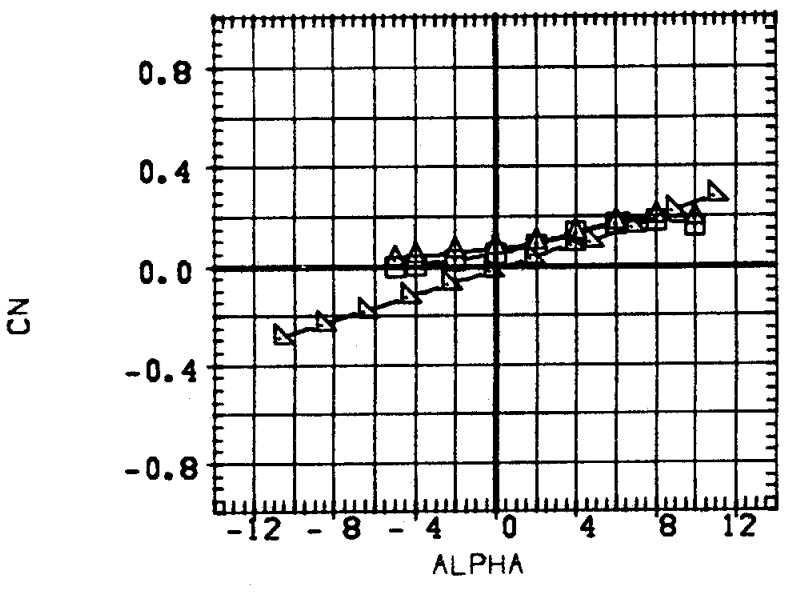
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

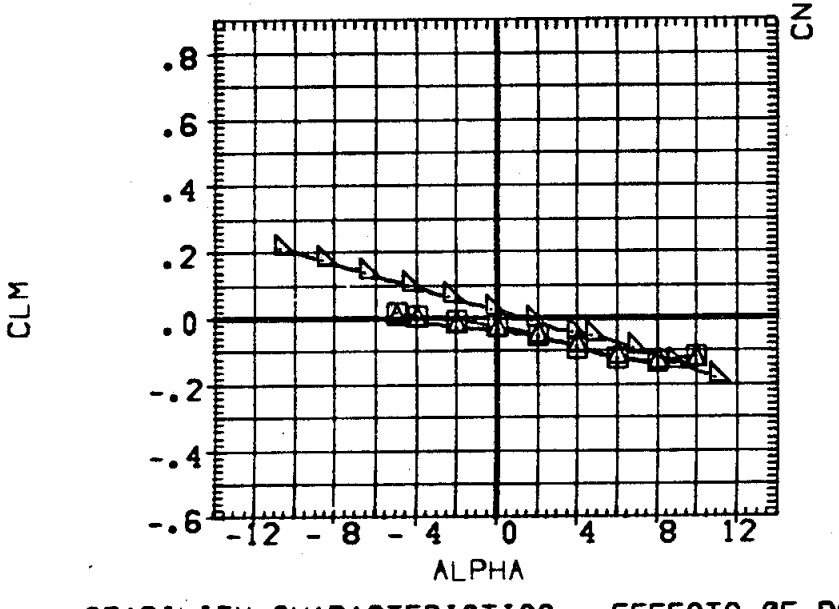
(G)MACH = 1.96

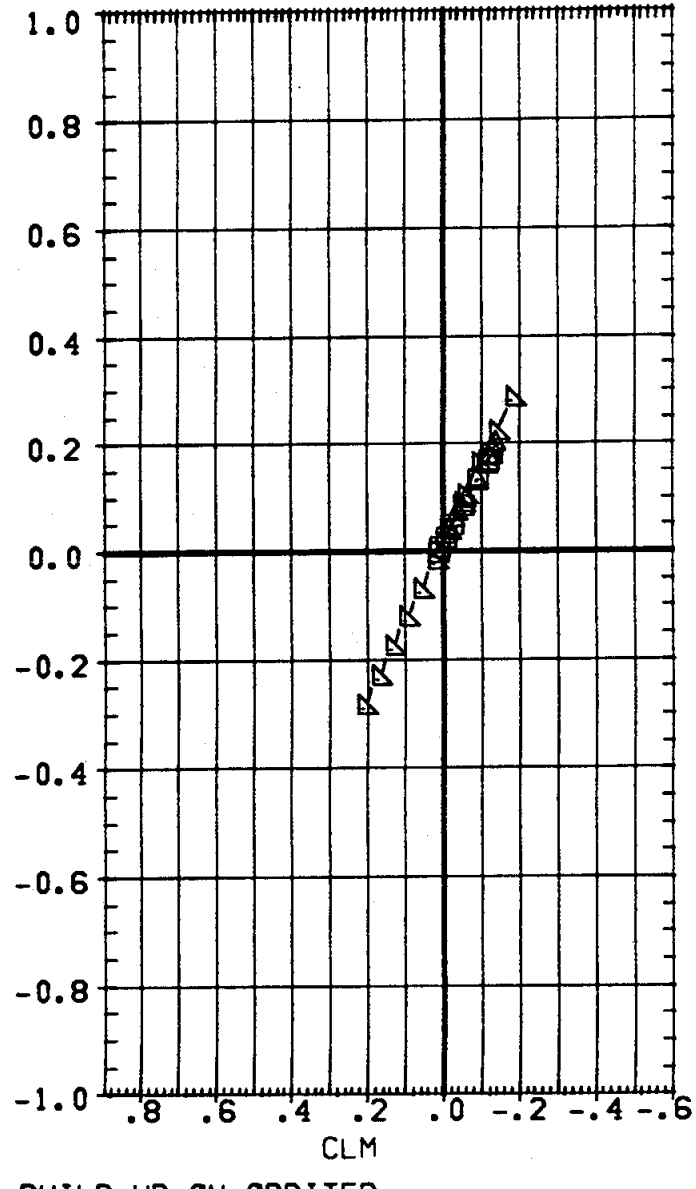
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)		DATA NOT AVAILABLE
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72038)		DATA NOT AVAILABLE
(A72017)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
1.500	.120	10.000	.000
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

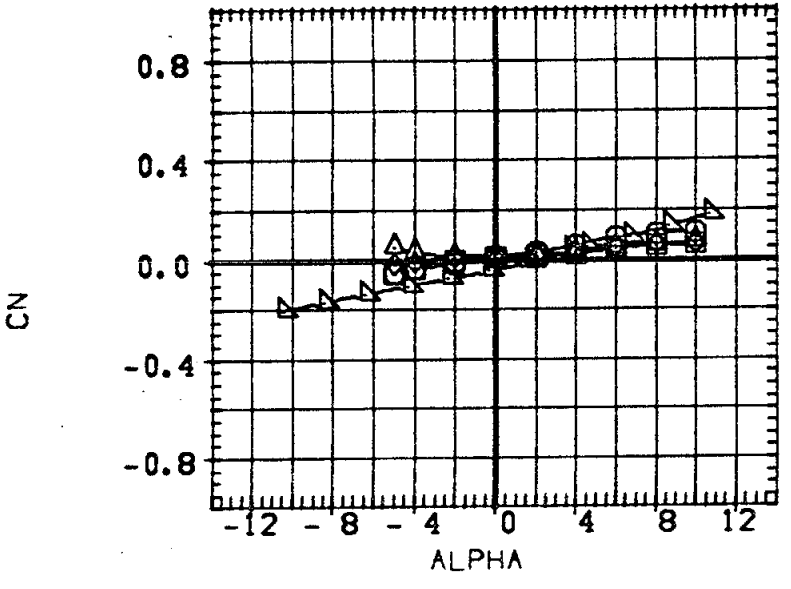
(H)MACH = 2.99

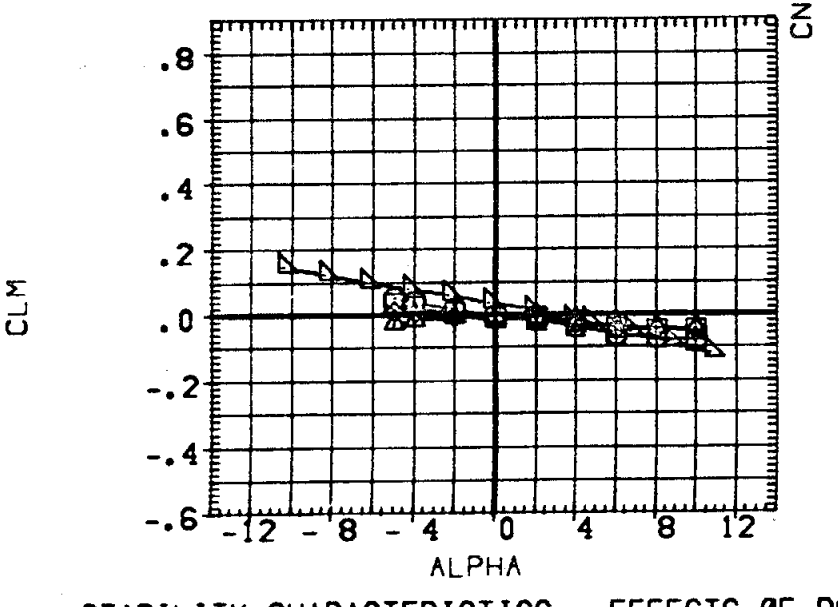
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72036)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)
(A72017)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

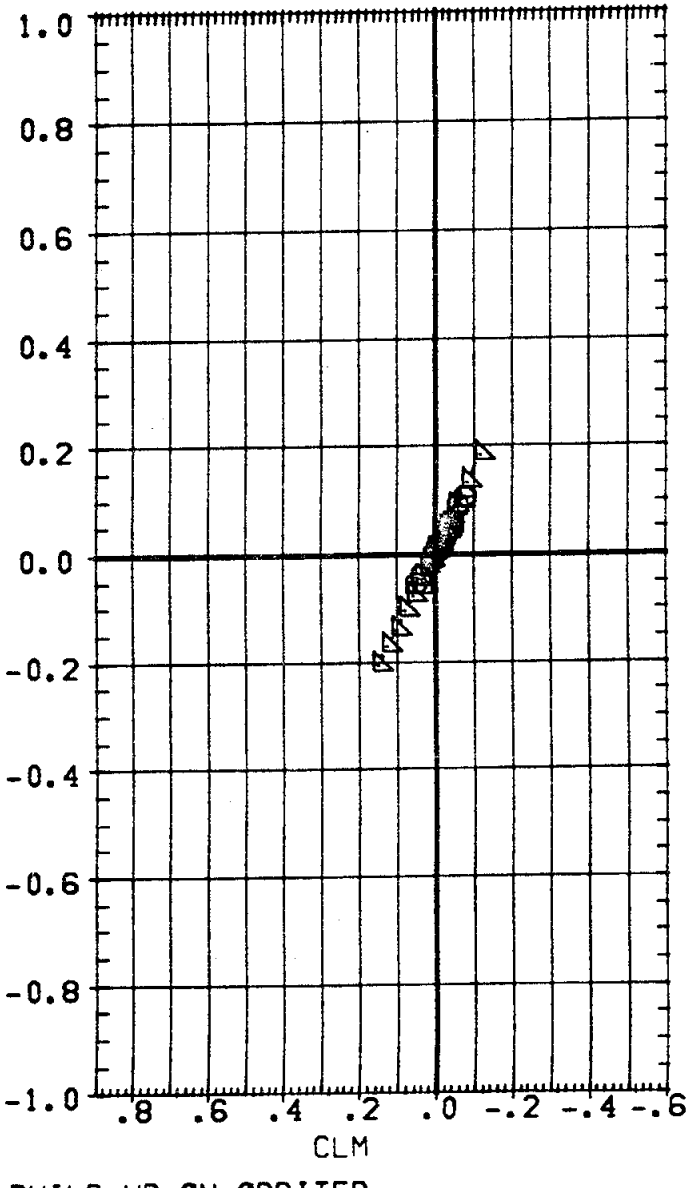
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
1.500	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





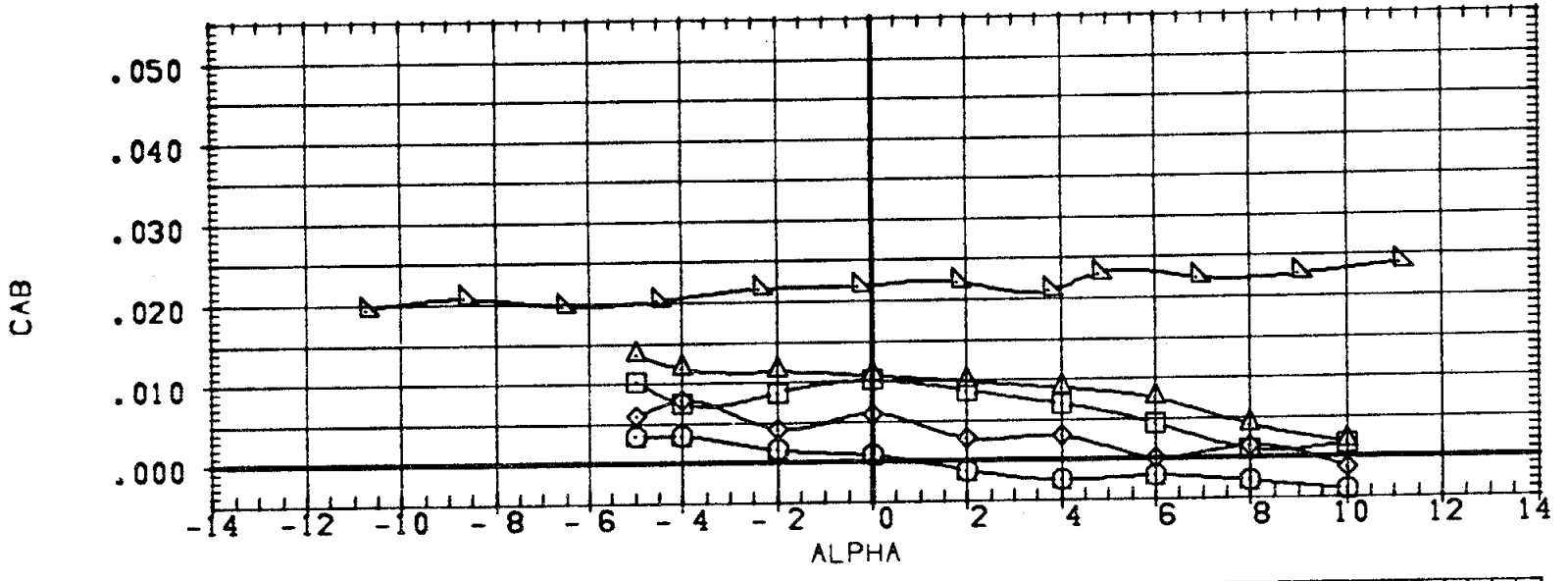


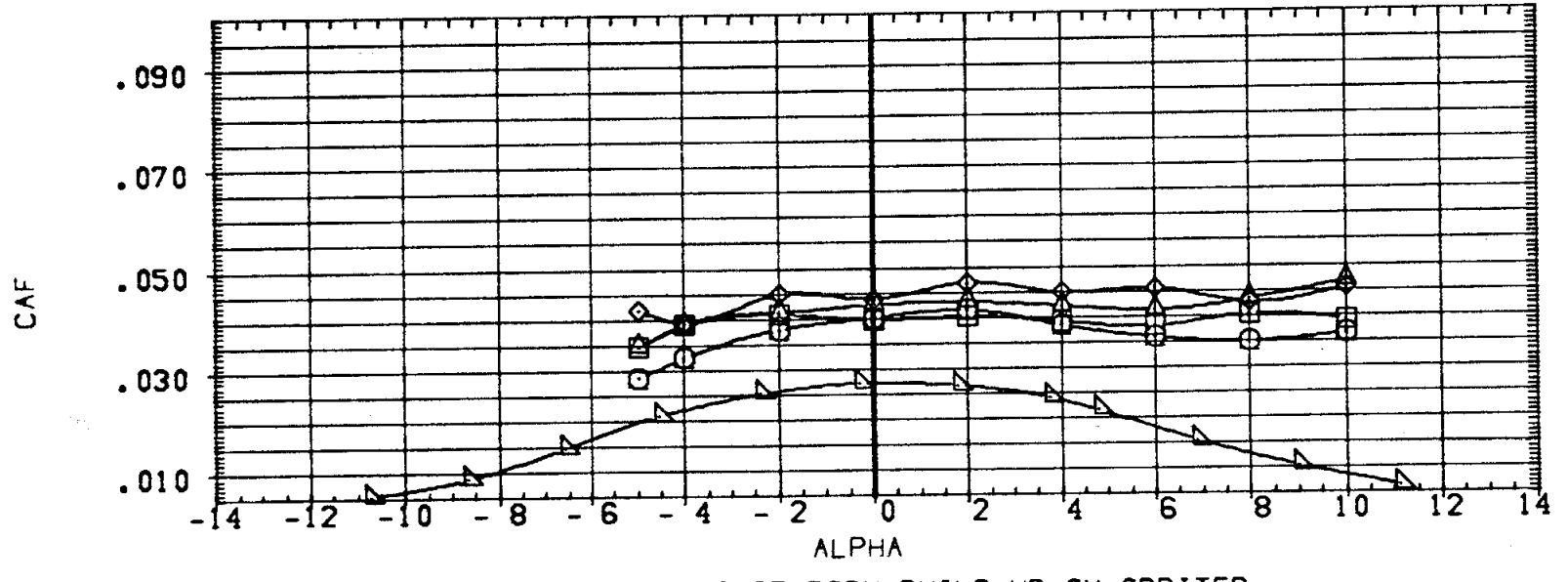
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(I)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72038)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



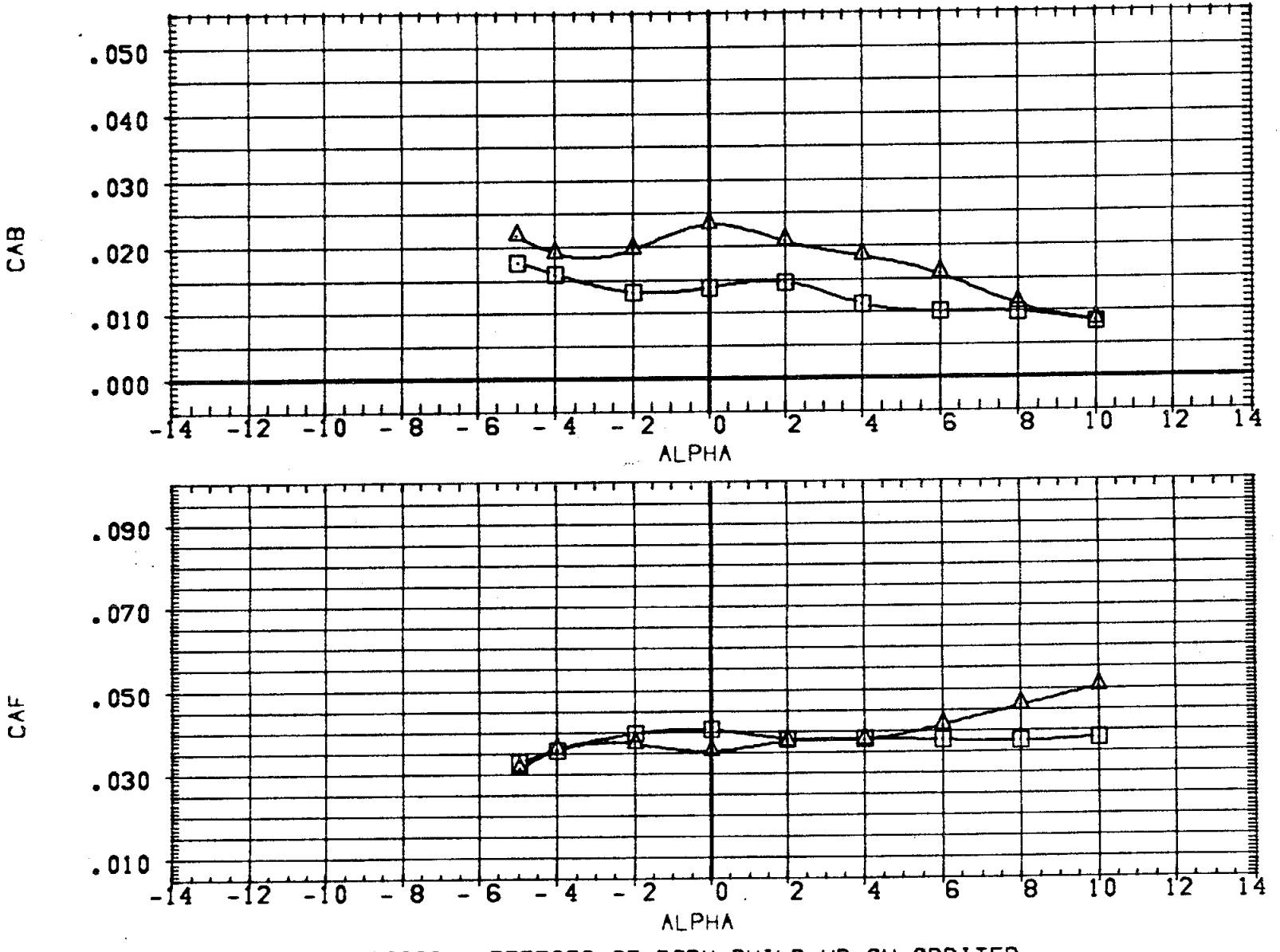


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)		DATA NOT AVAILABLE	1.500	.120	10.000	
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72036)		DATA NOT AVAILABLE	1.500	.120	10.000	.000
(A72017)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

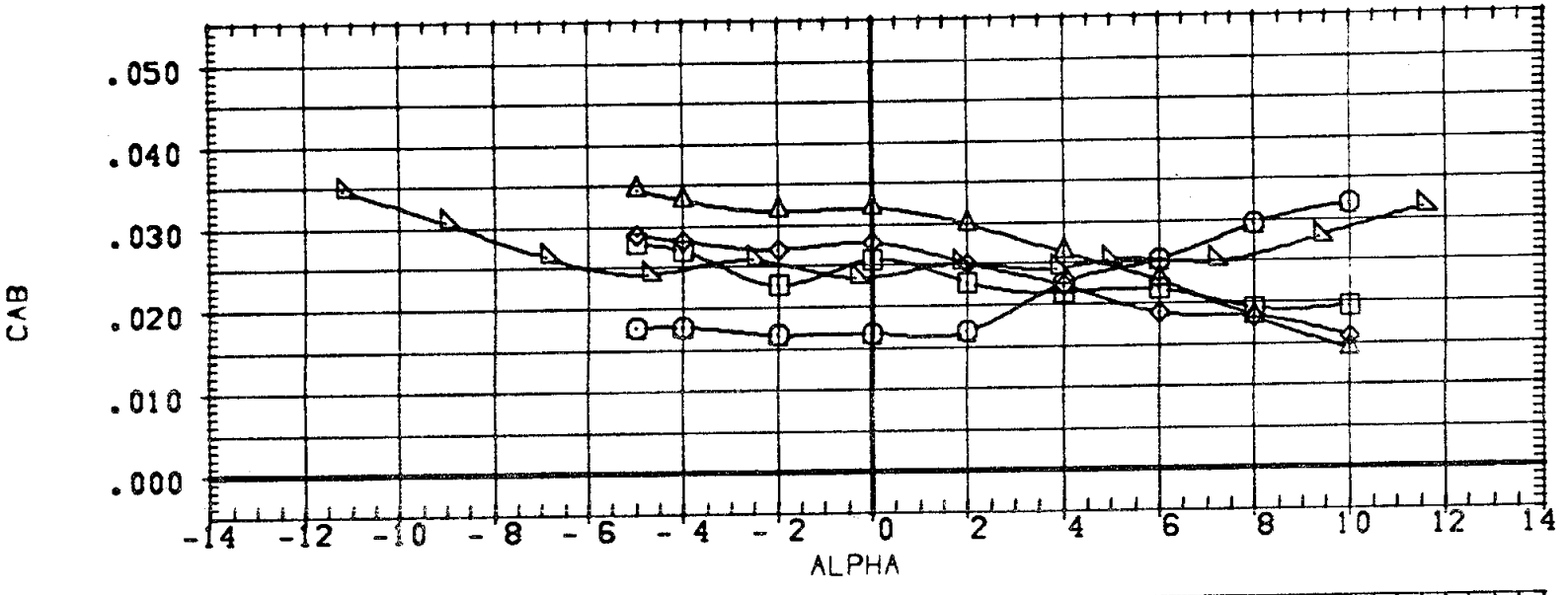


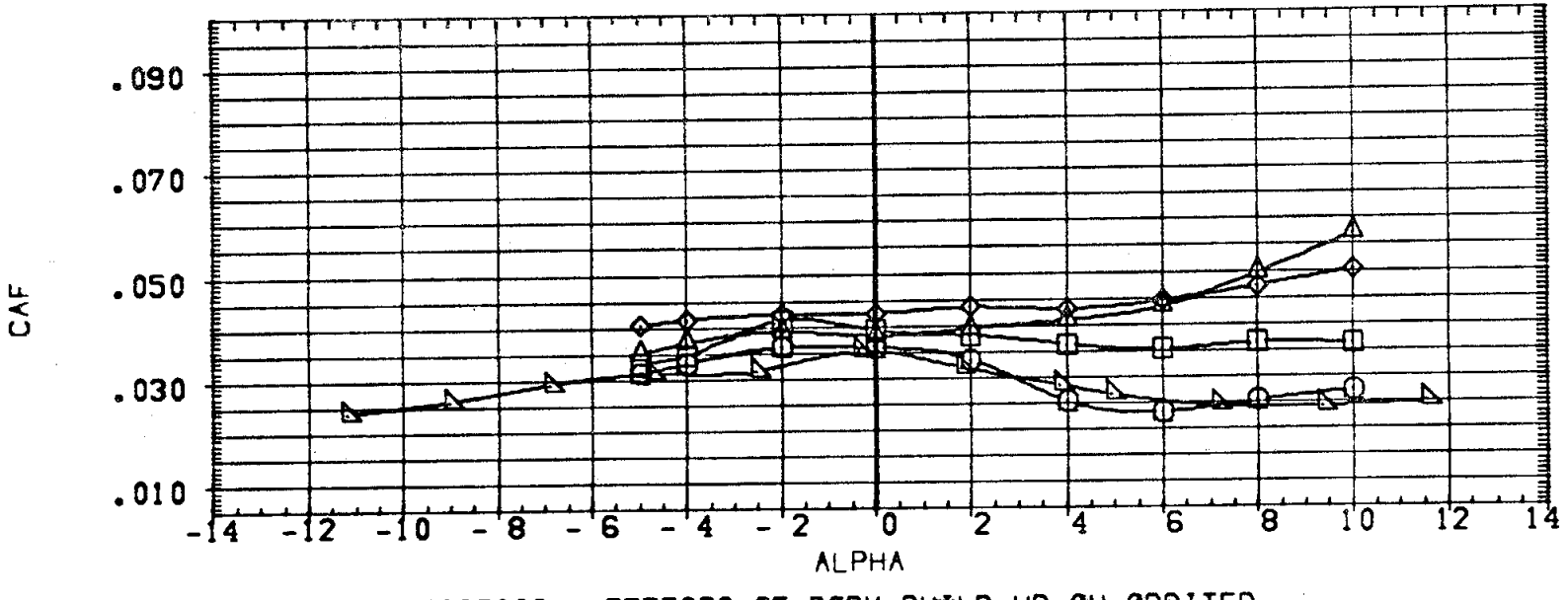
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(B)MACH = .80

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72036)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



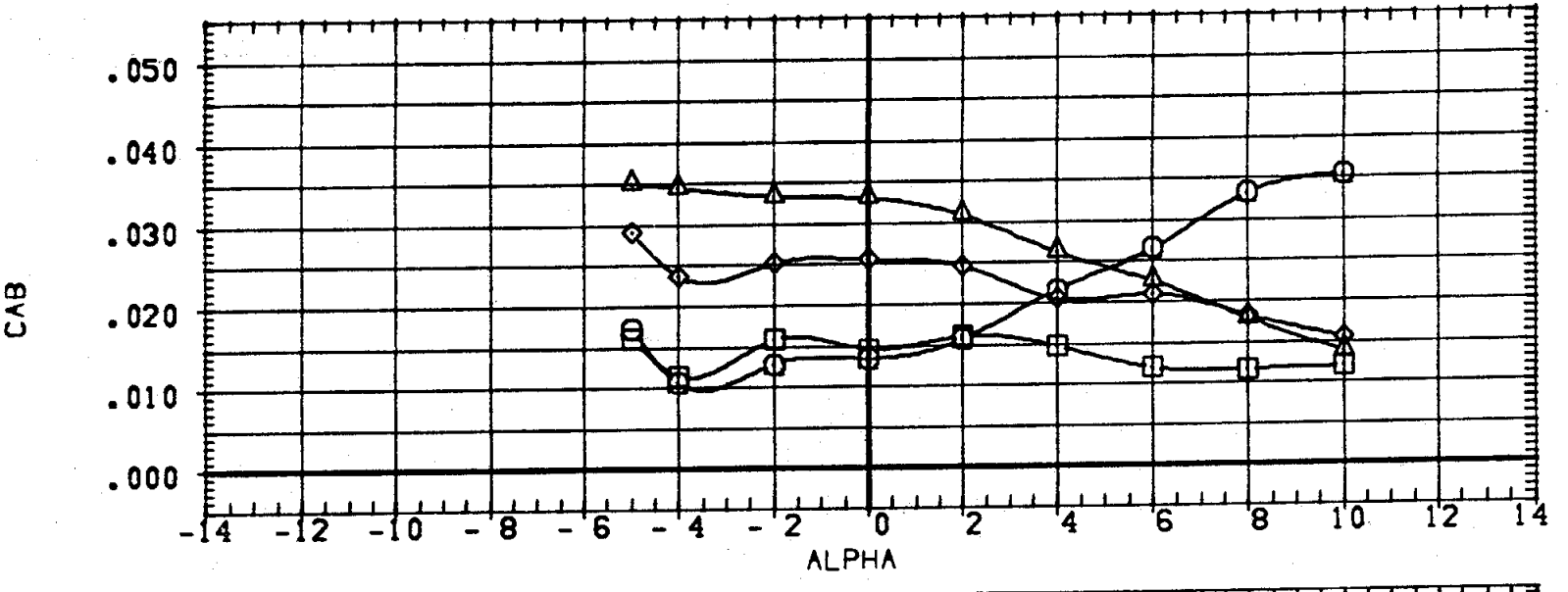


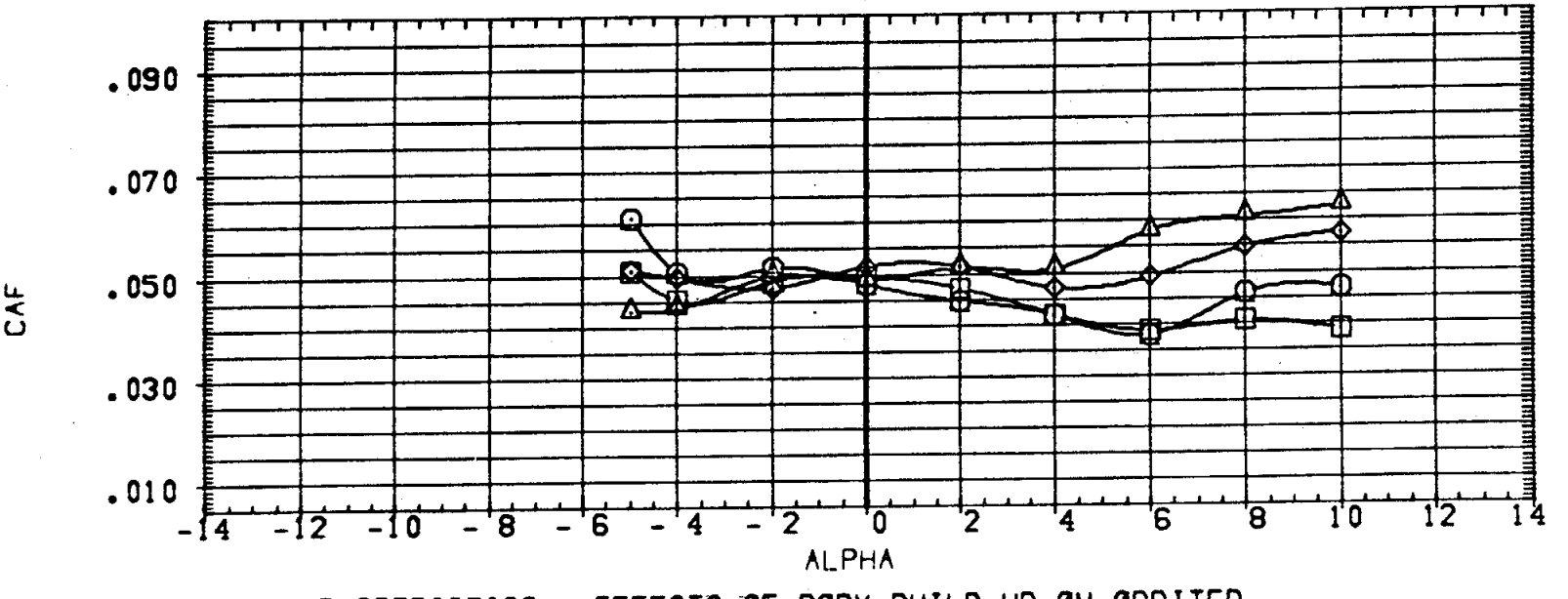
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)	⊠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72038)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)	◪	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





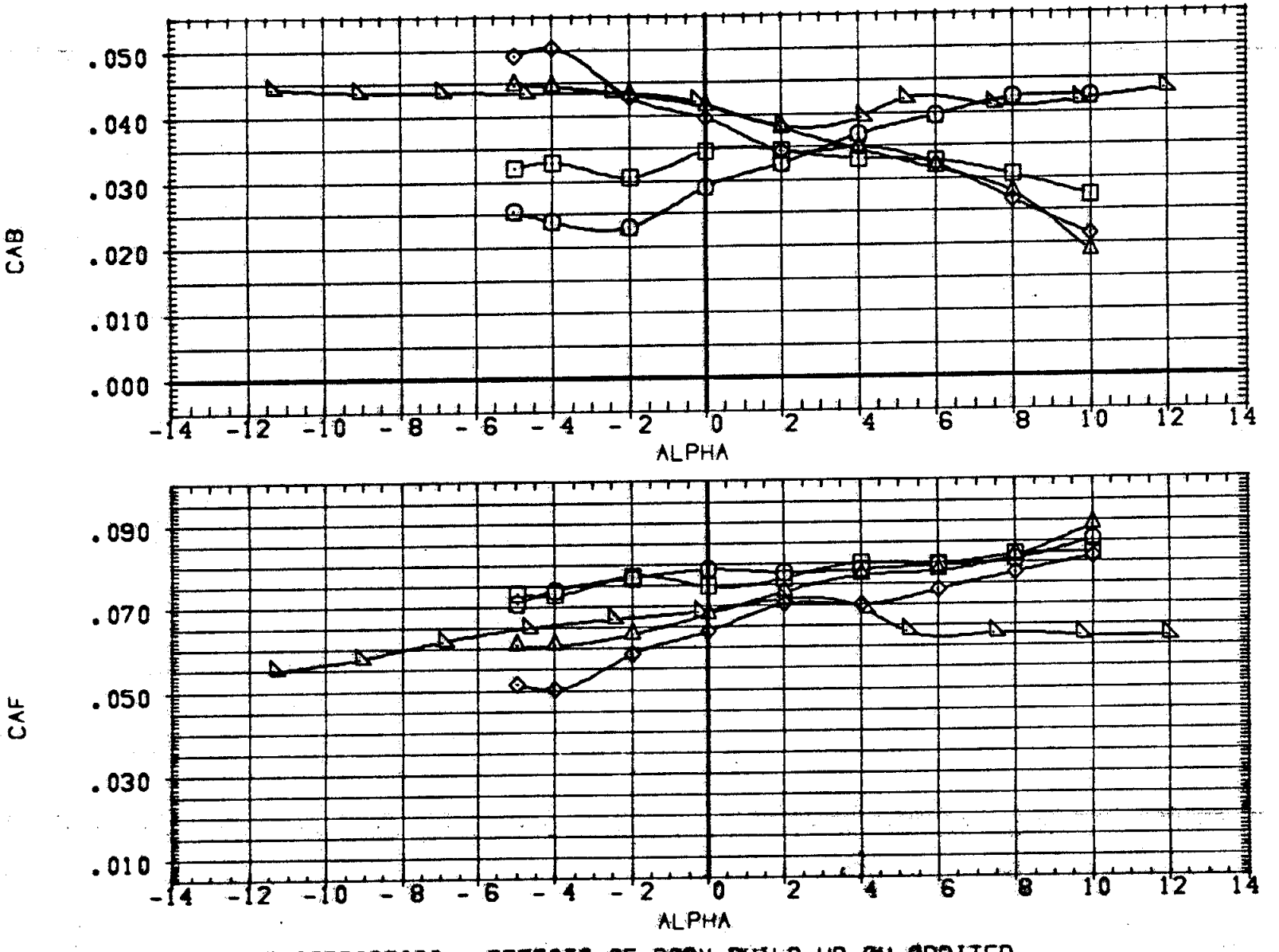
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(D)MACH = .99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72030)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)		MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

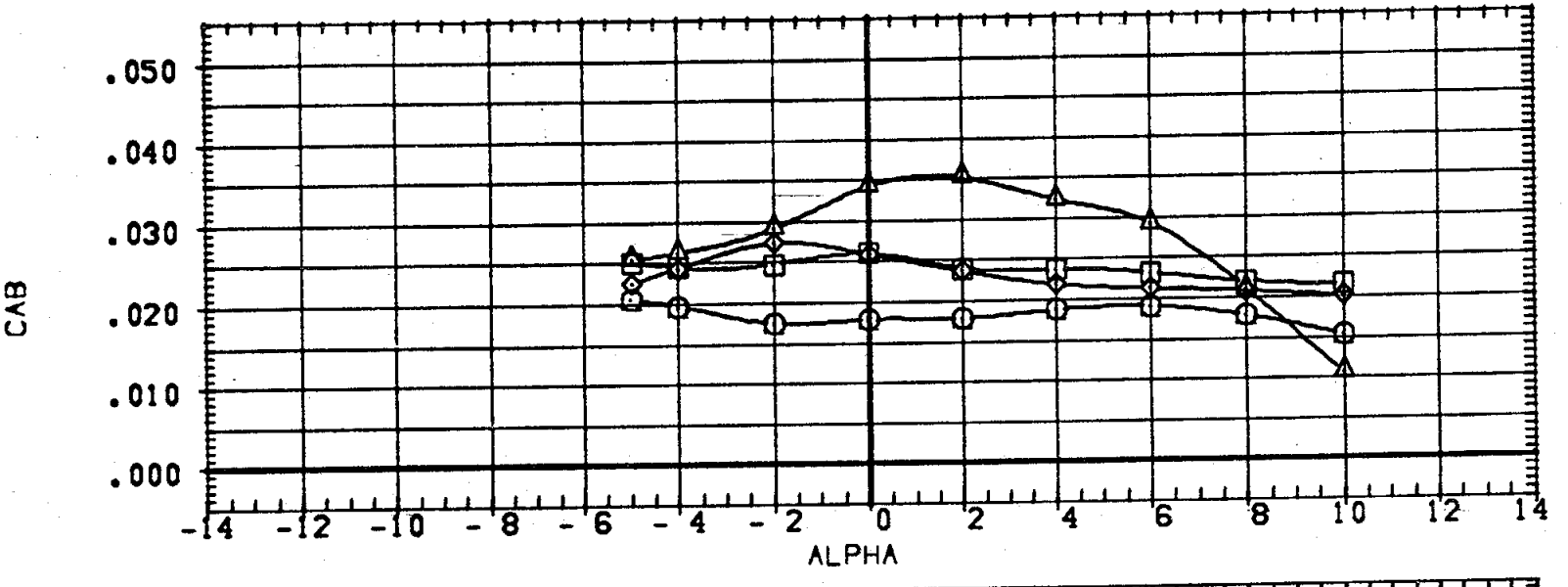


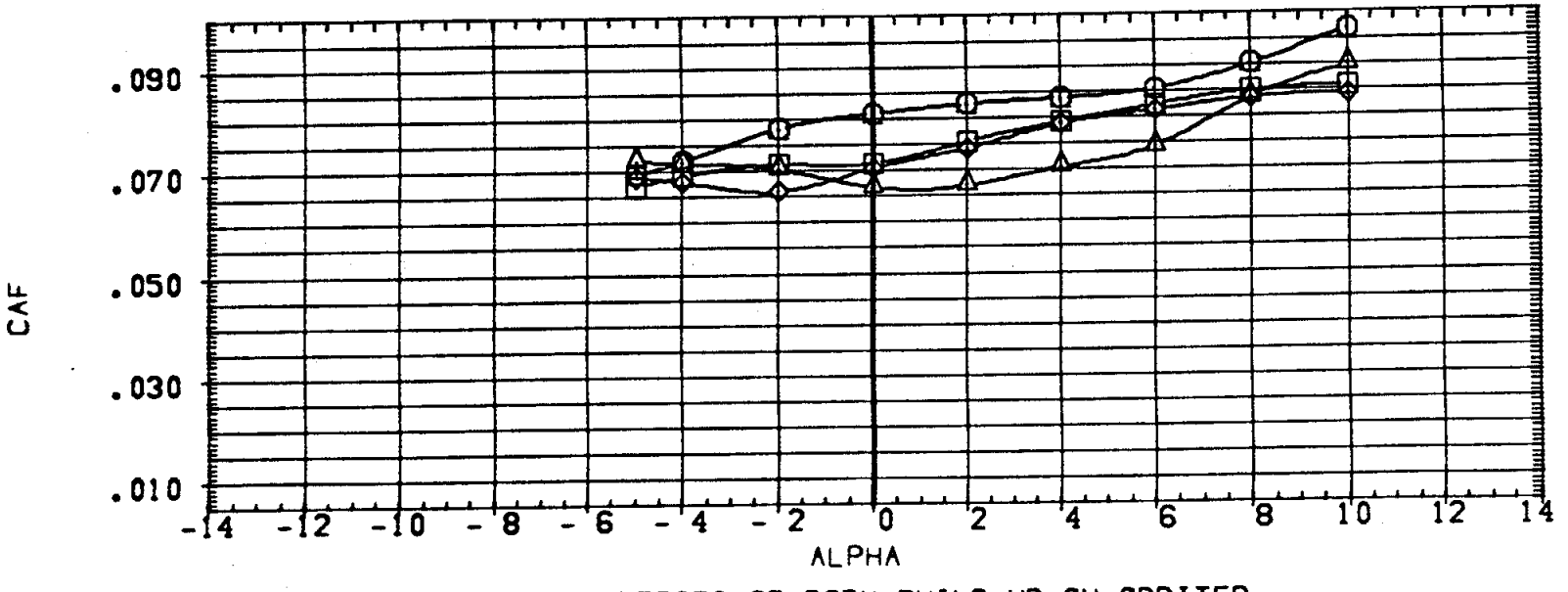
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(E)MACH = 1.19

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)	○	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)	△	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72036)	◇	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)	□	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)		DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





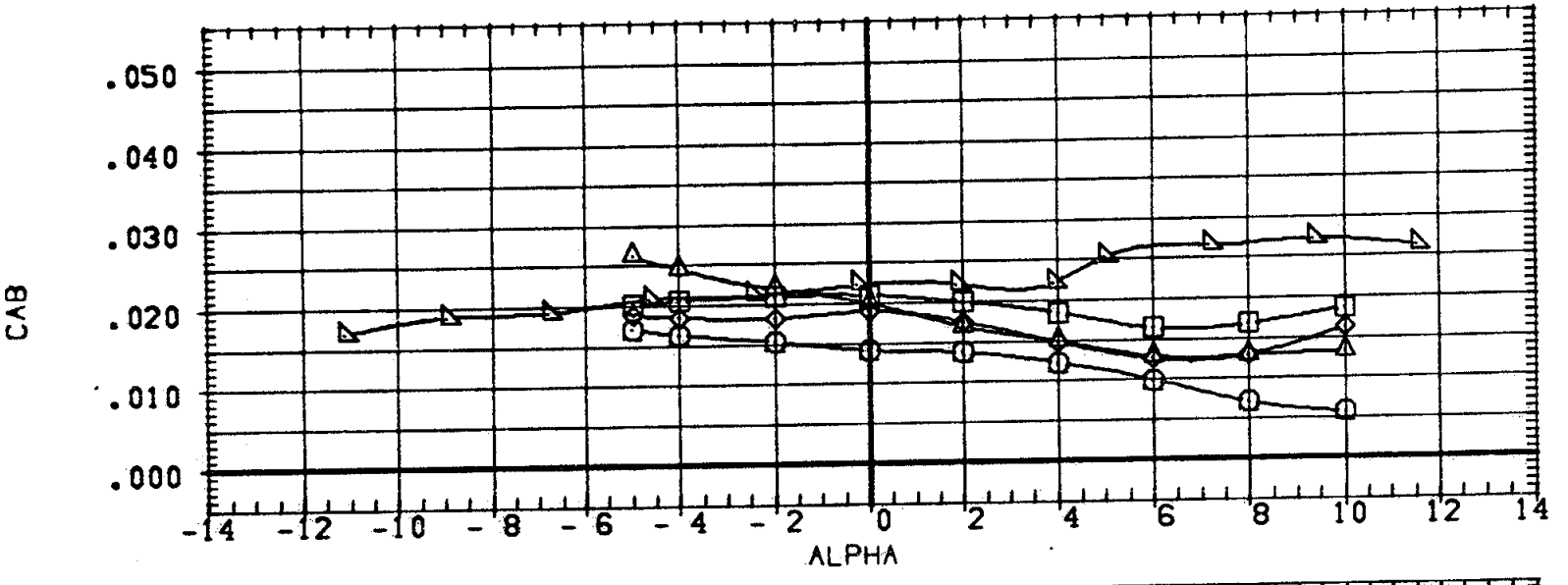
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

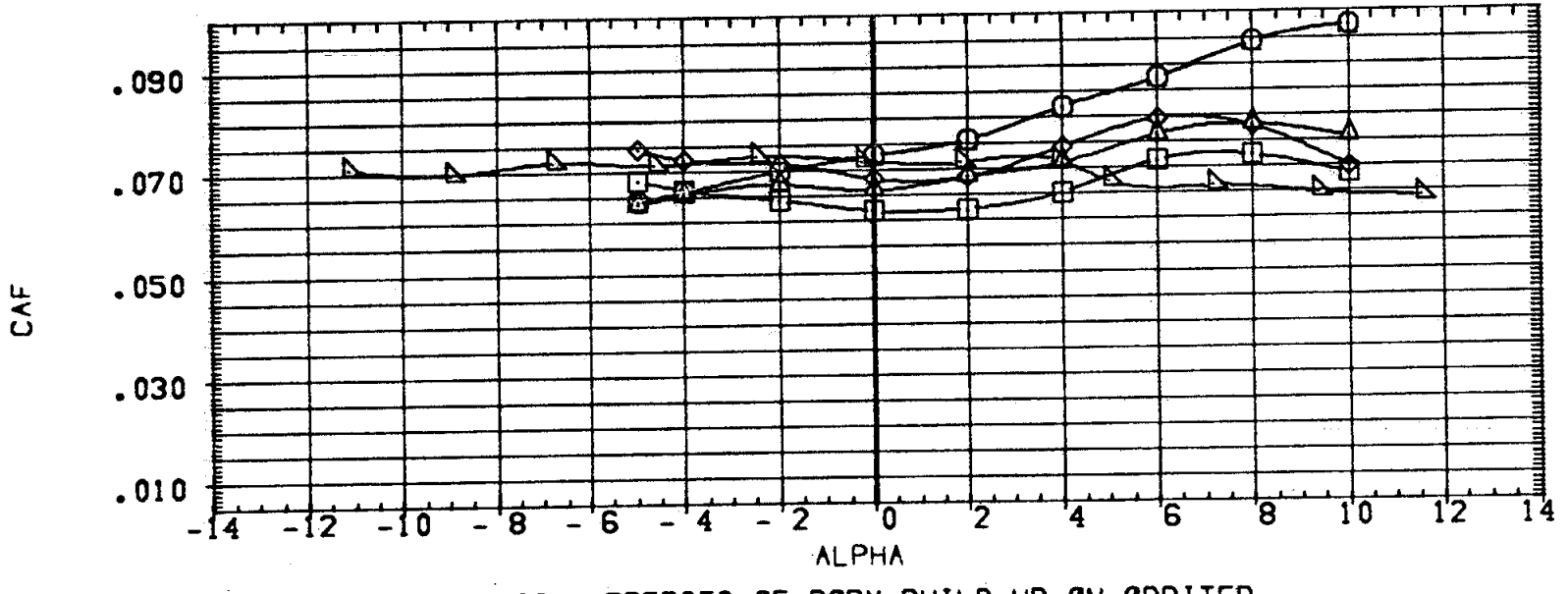
(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72036)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

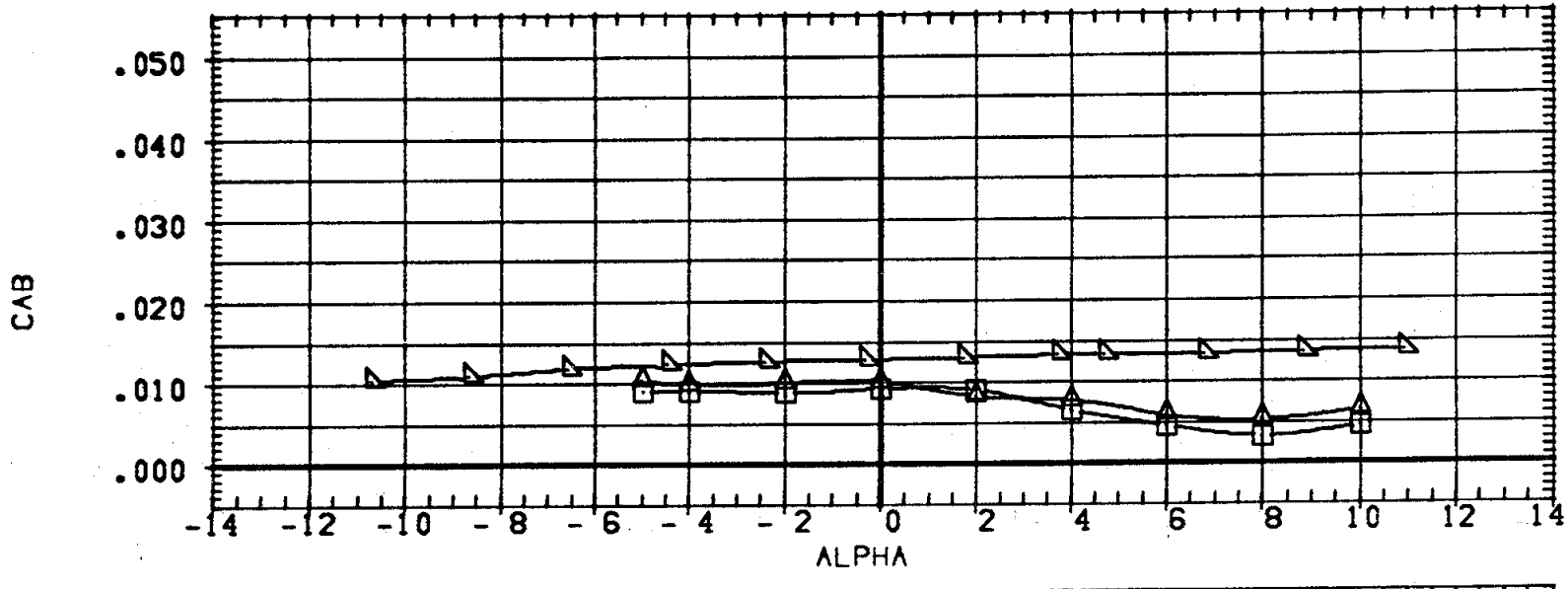
(G)MACH = 1.96

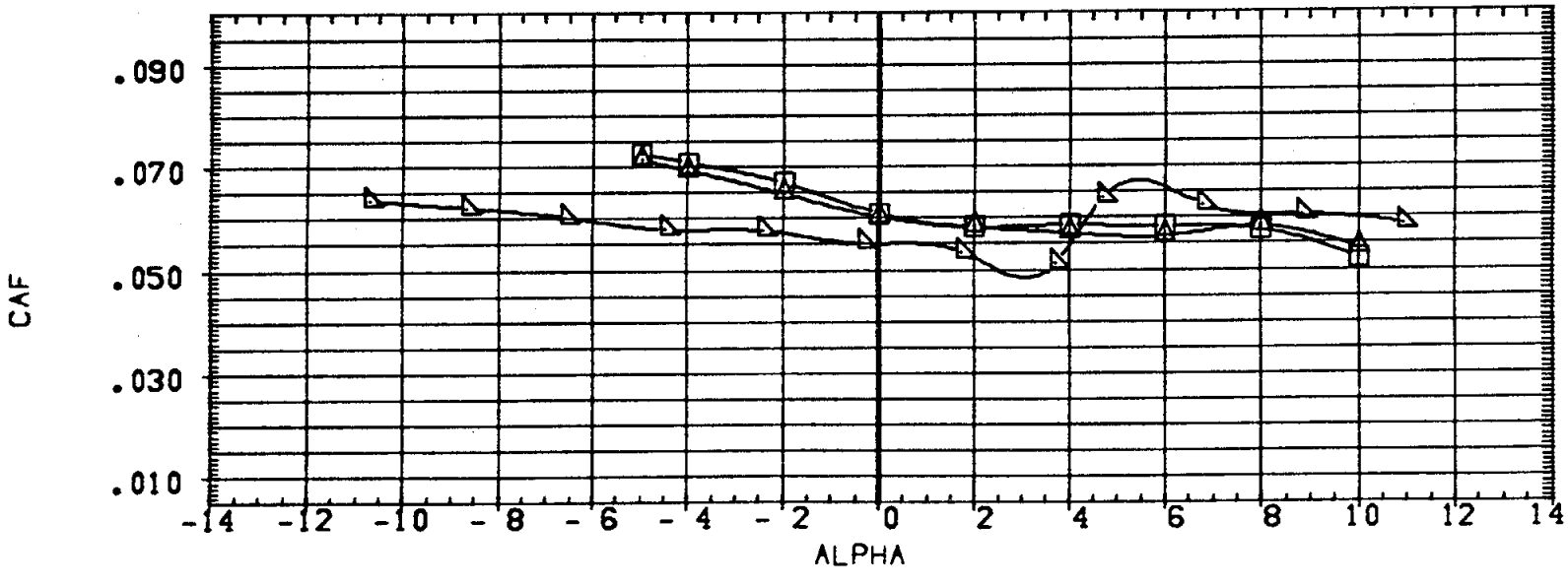
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	DATA NOT AVAILABLE
(A72010)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72036)	◇	DATA NOT AVAILABLE
(A72017)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	▽	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
1.500	.120	10.000	.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





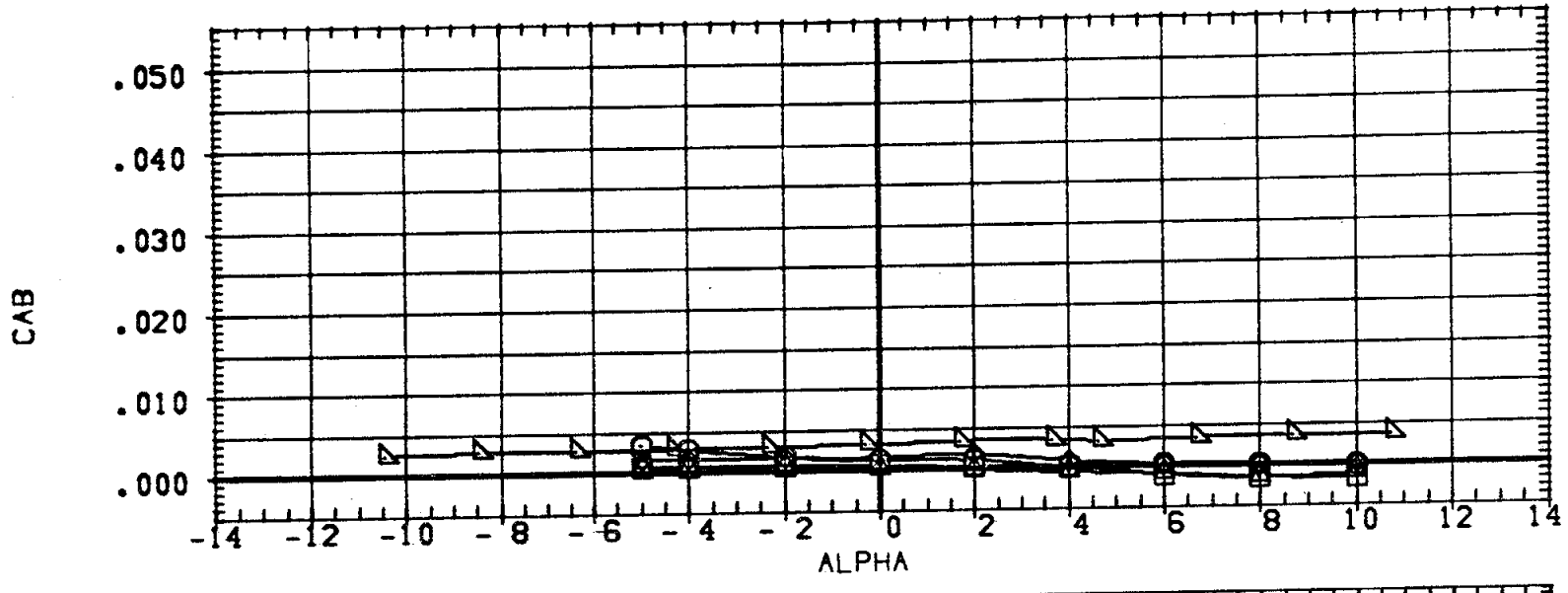
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

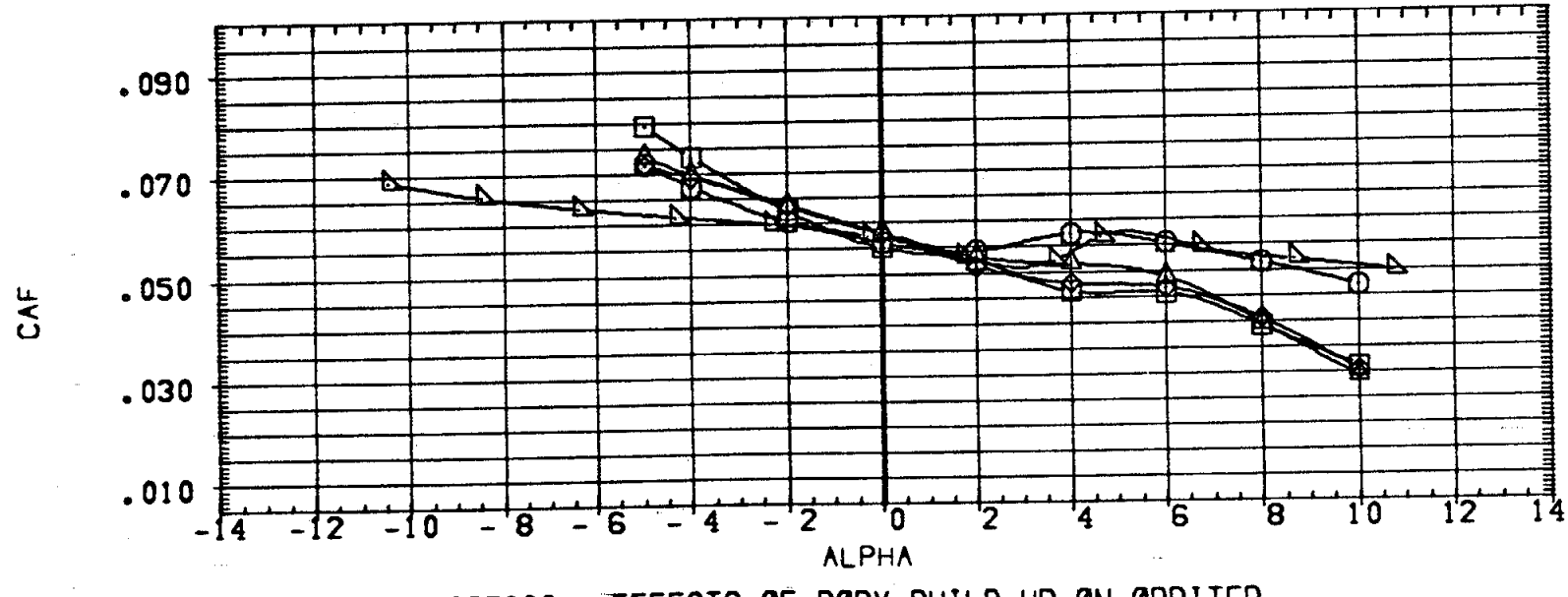
(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72010)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	.000
(A72038)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	1.500	.120	10.000	.000
(A72017)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	.000
(A72501)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





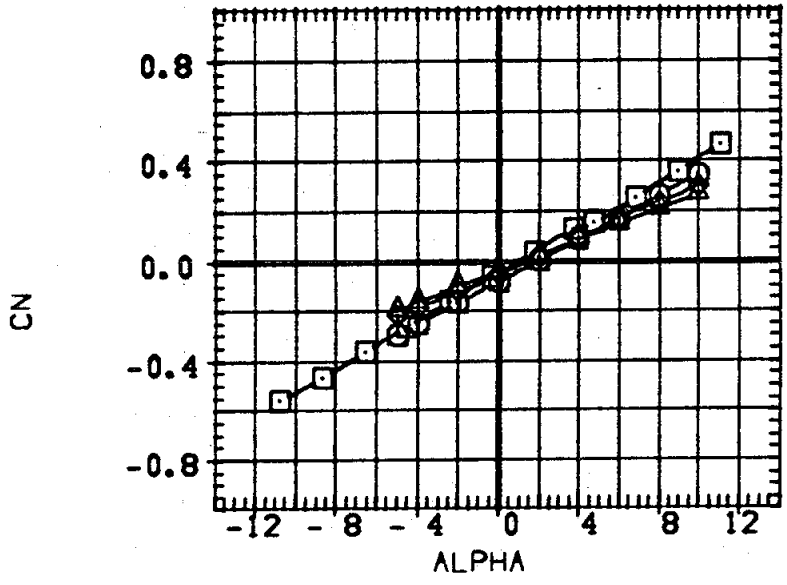
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

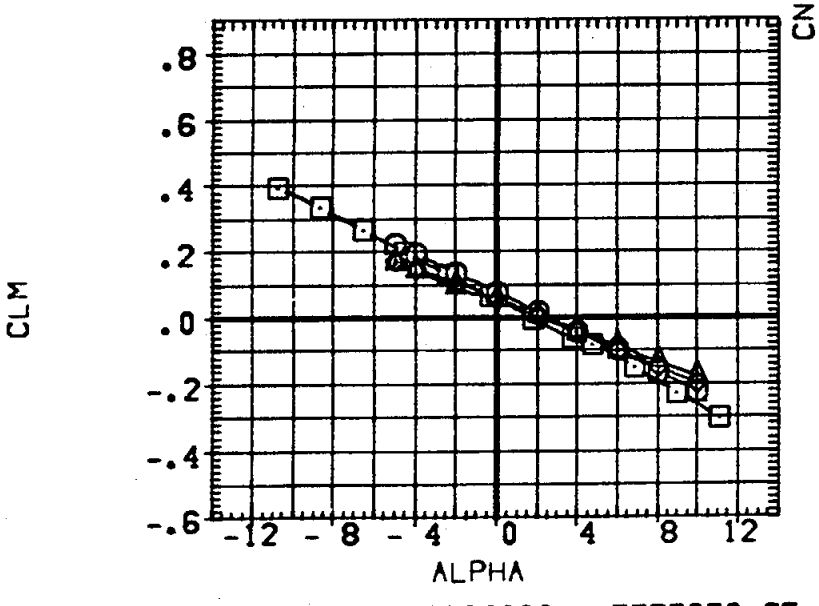
(I)MACH = 4.96

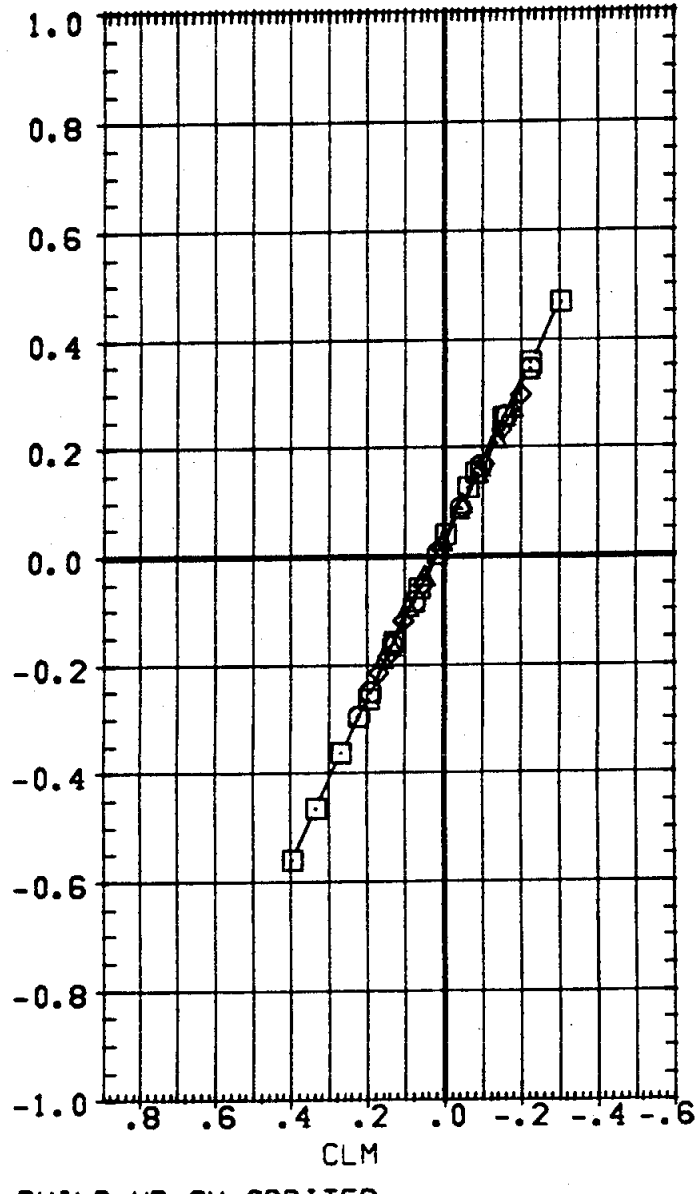
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72022)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(B1)
(A72026)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(B1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTA2	RUDFLR	X-SRB
.000	-.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

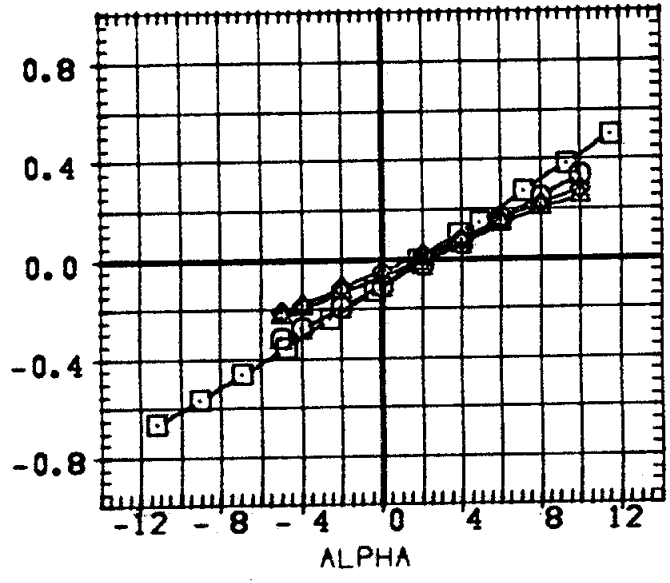
(A)MACH = .60

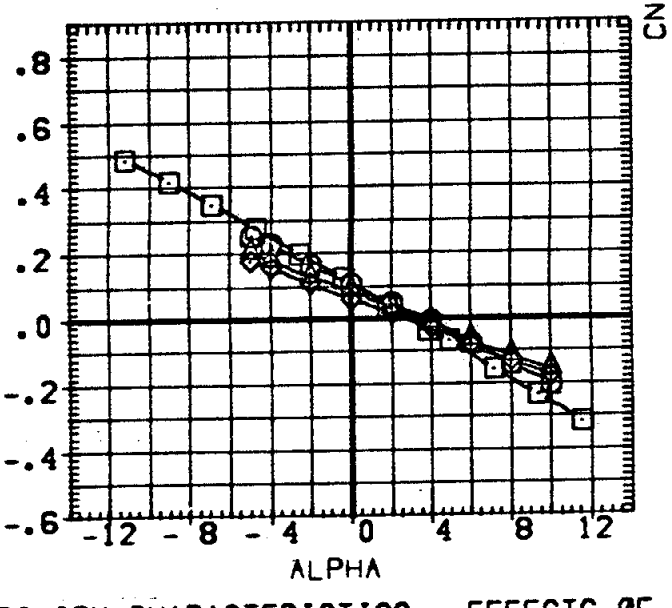
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)
(A72022)	△	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1)
(A72029)	◇	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)

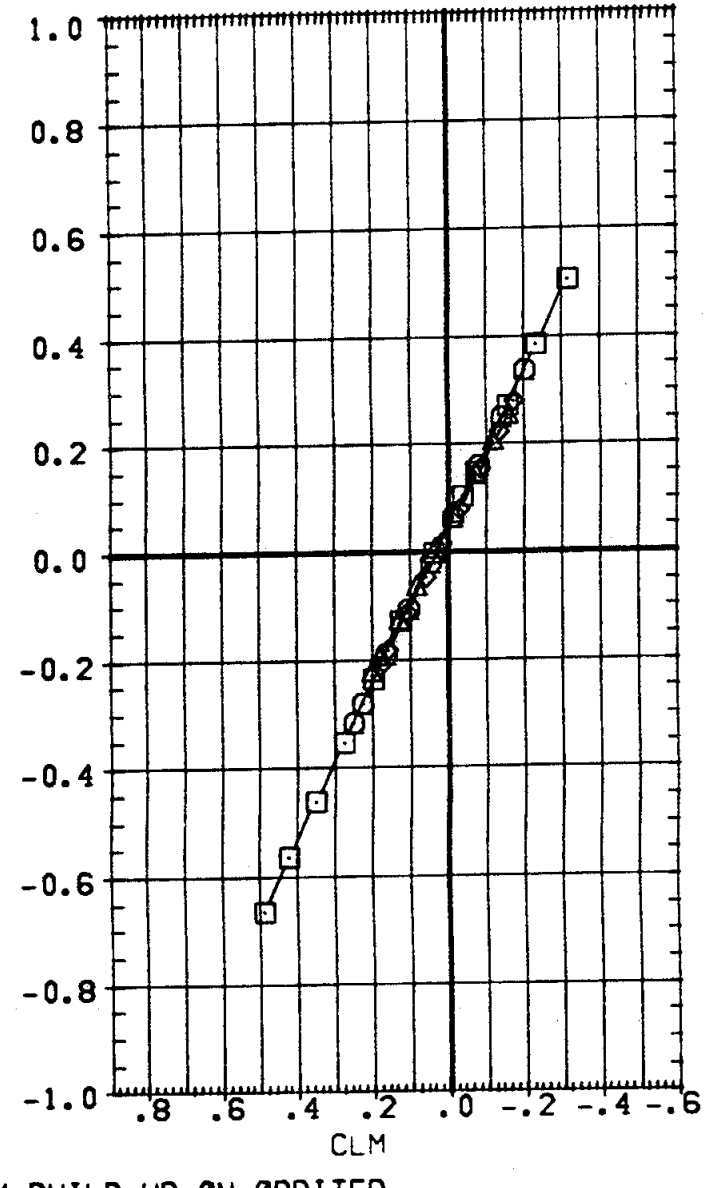
ORBINC	DELTAZ	RUOFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







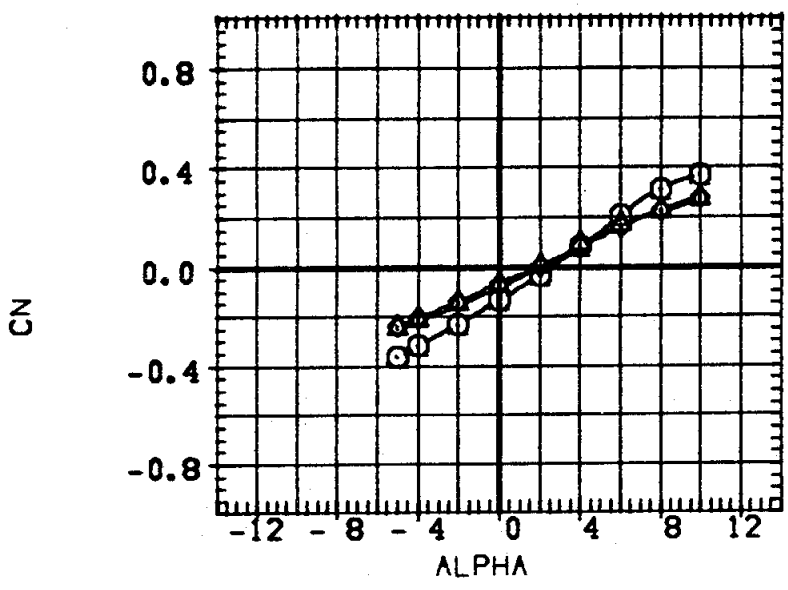
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

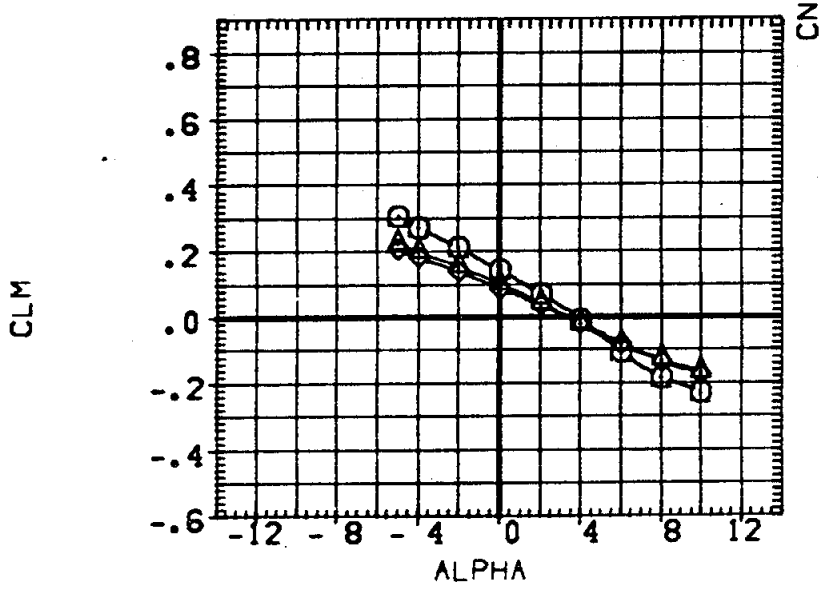
(B)MACH = .90

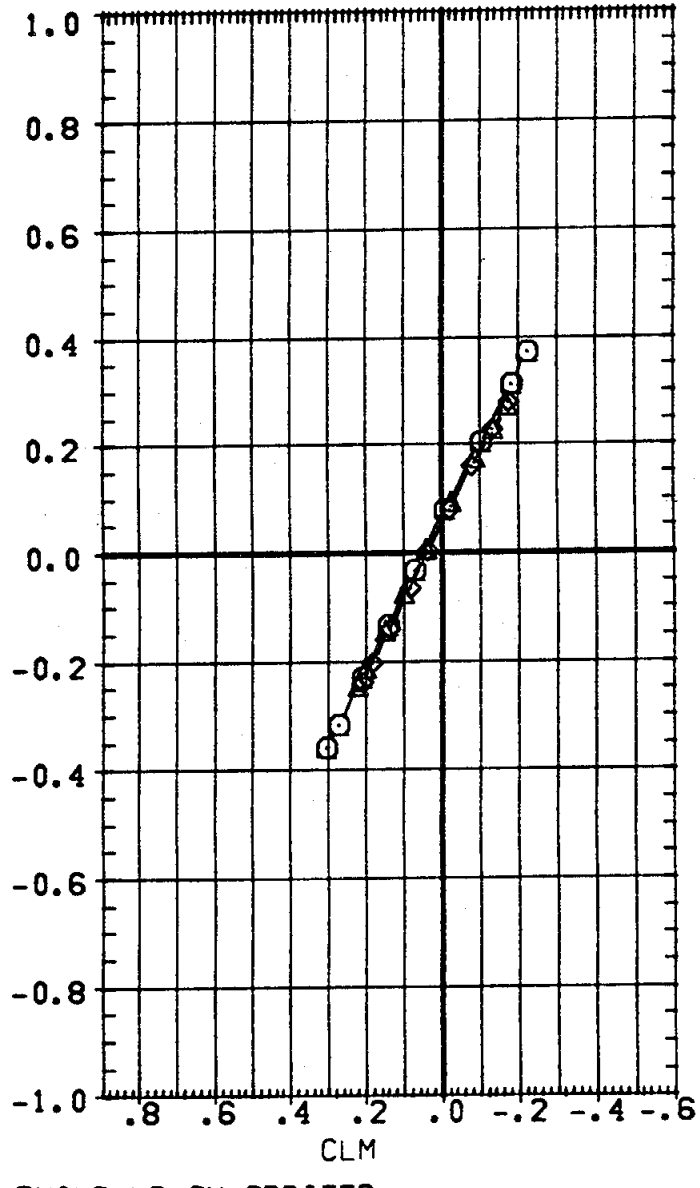
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)
(A72022)	△	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72029)	◇	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72S01)	□	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

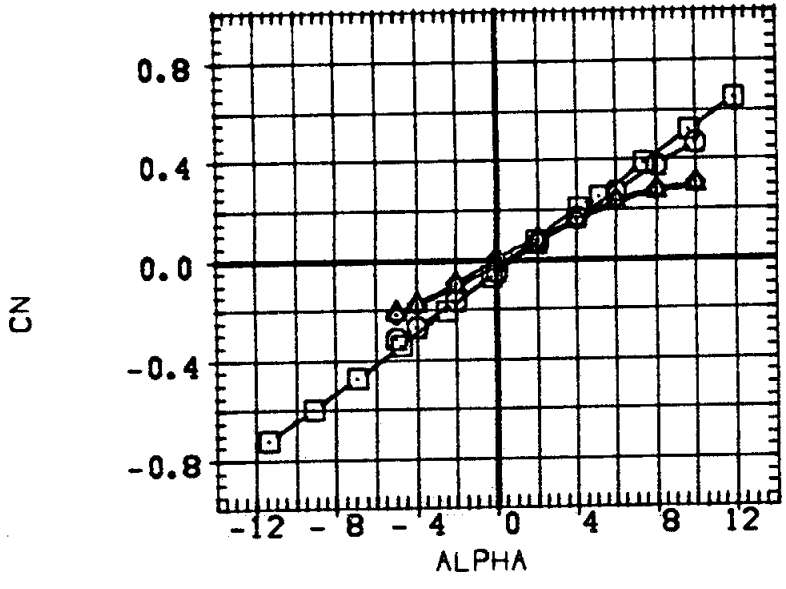
(C)MACH = 1.00

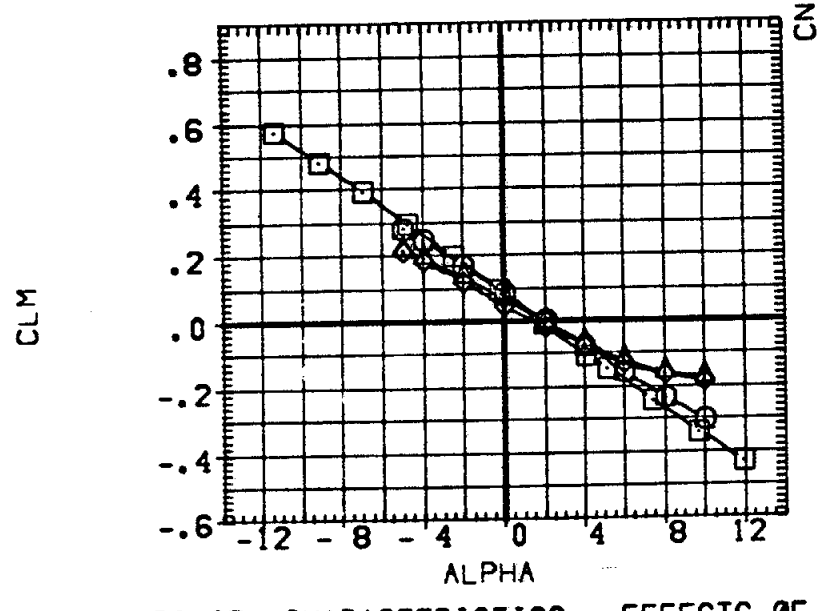
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72022)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72029)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

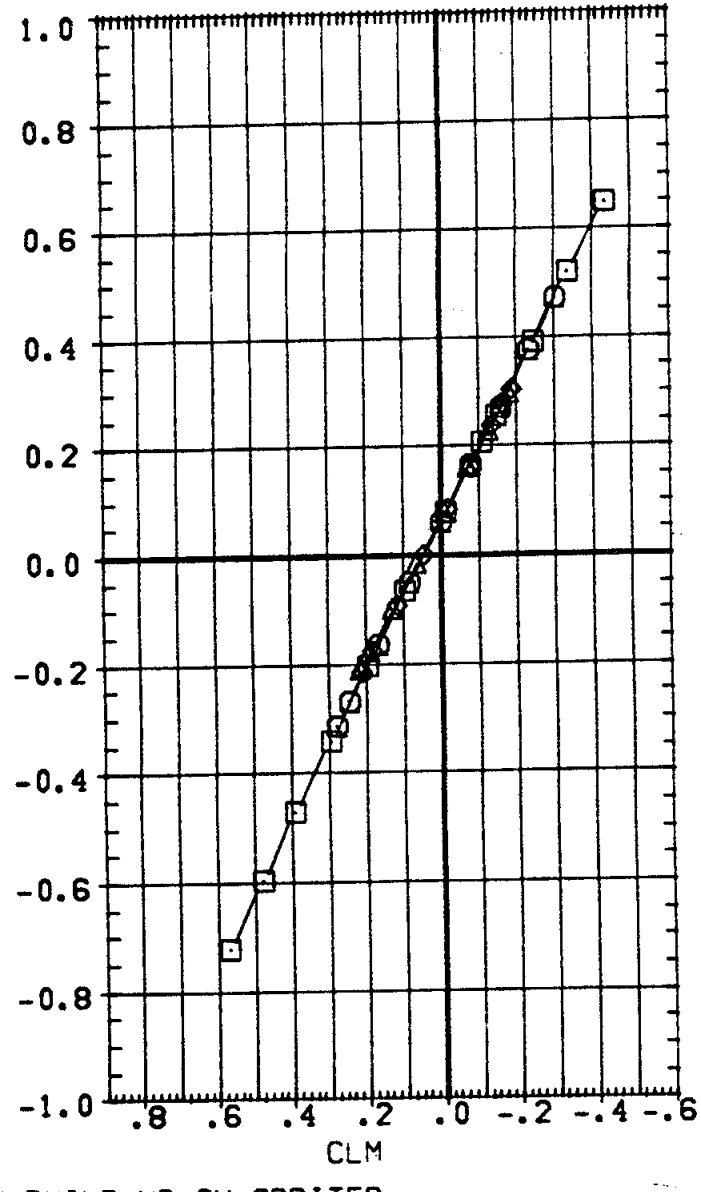
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

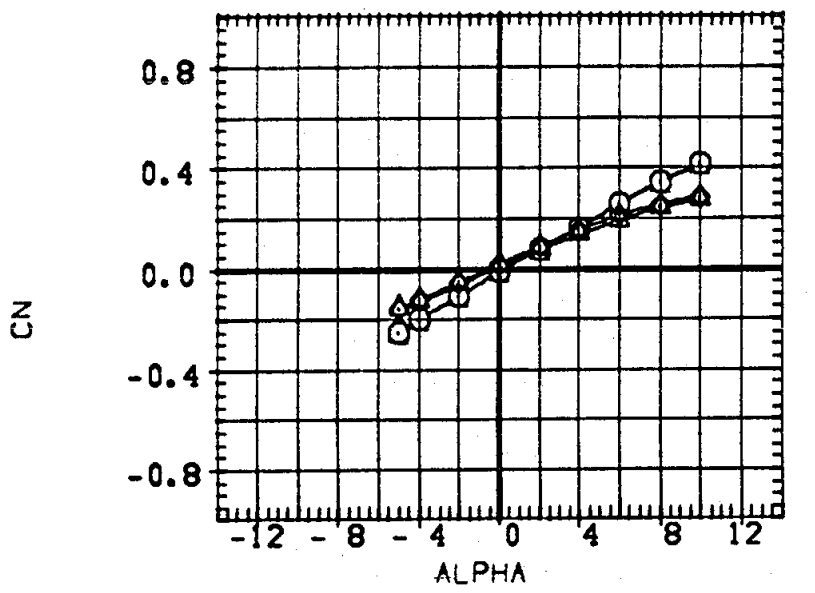
(D)MACH = 1.21

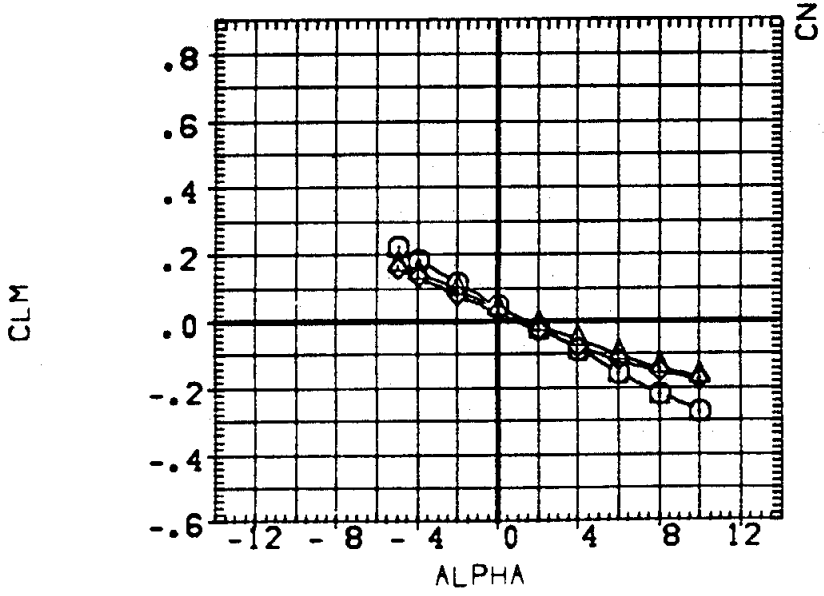
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)
(A72022)	△	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1)
(A72029)	◇	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)
(A72301)	□	DATA NOT AVAILABLE

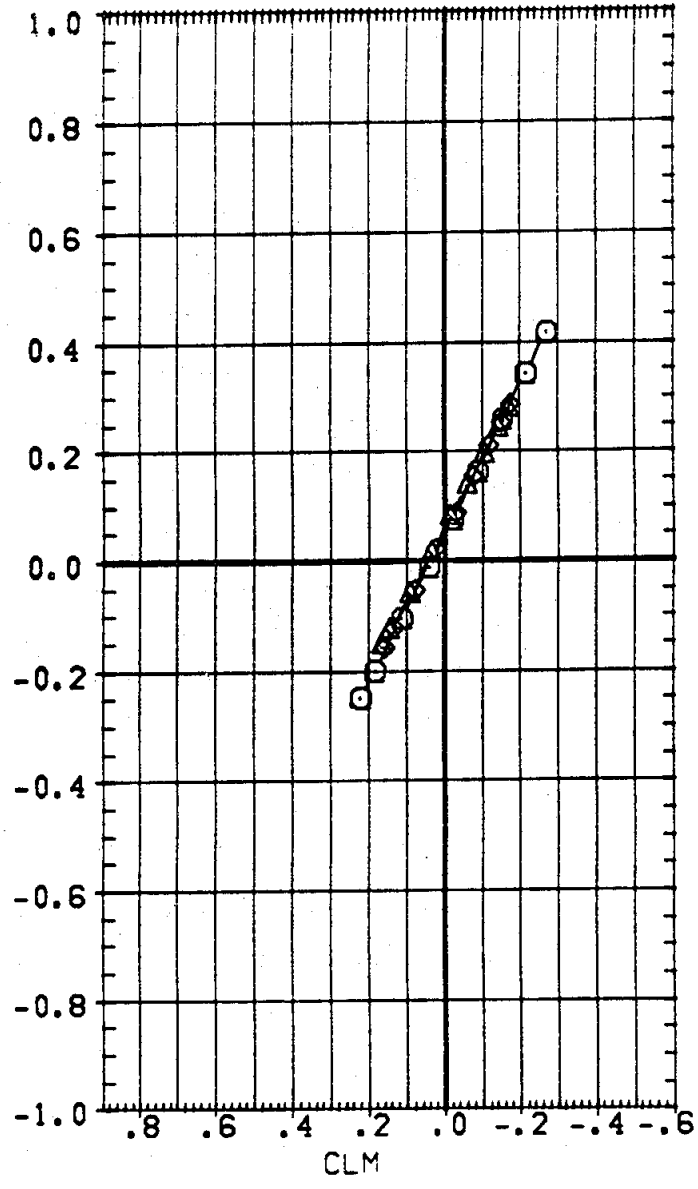
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMA

SREF	3220.0000	S..FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







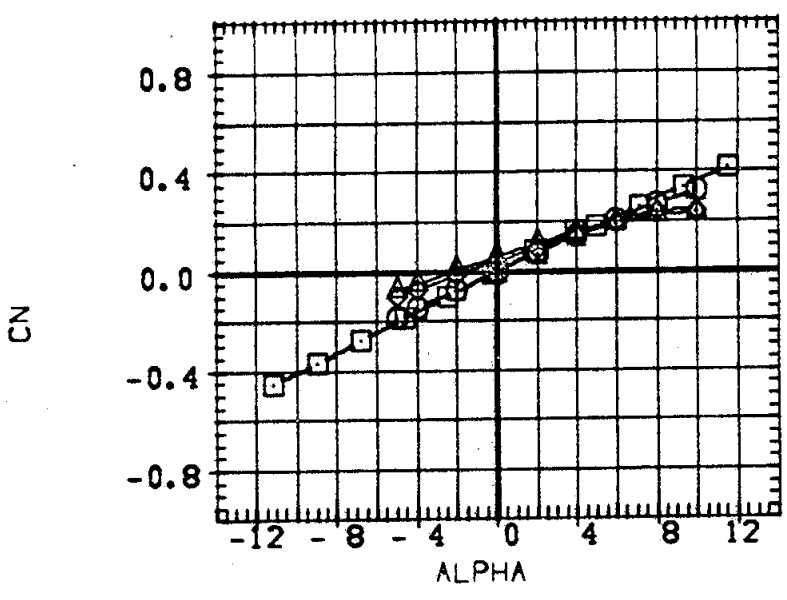
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

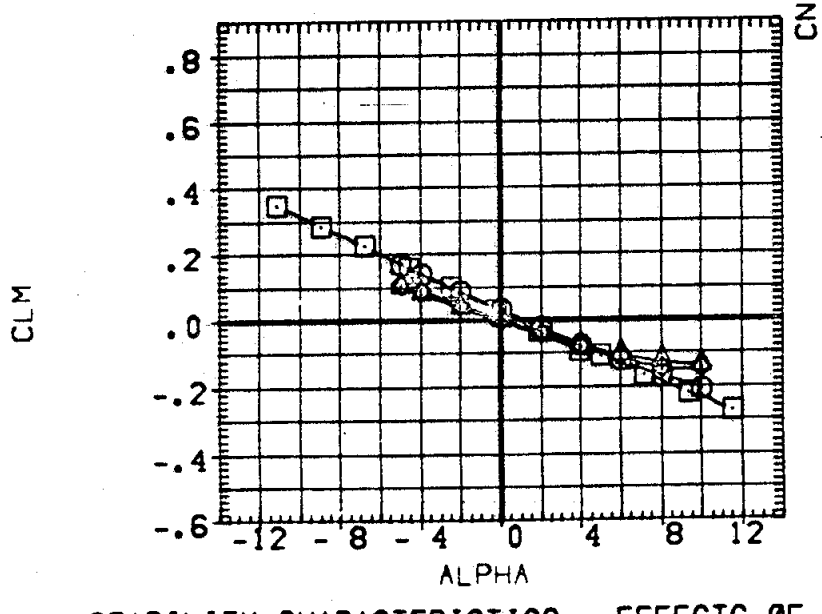
(E)MACH = 1.46

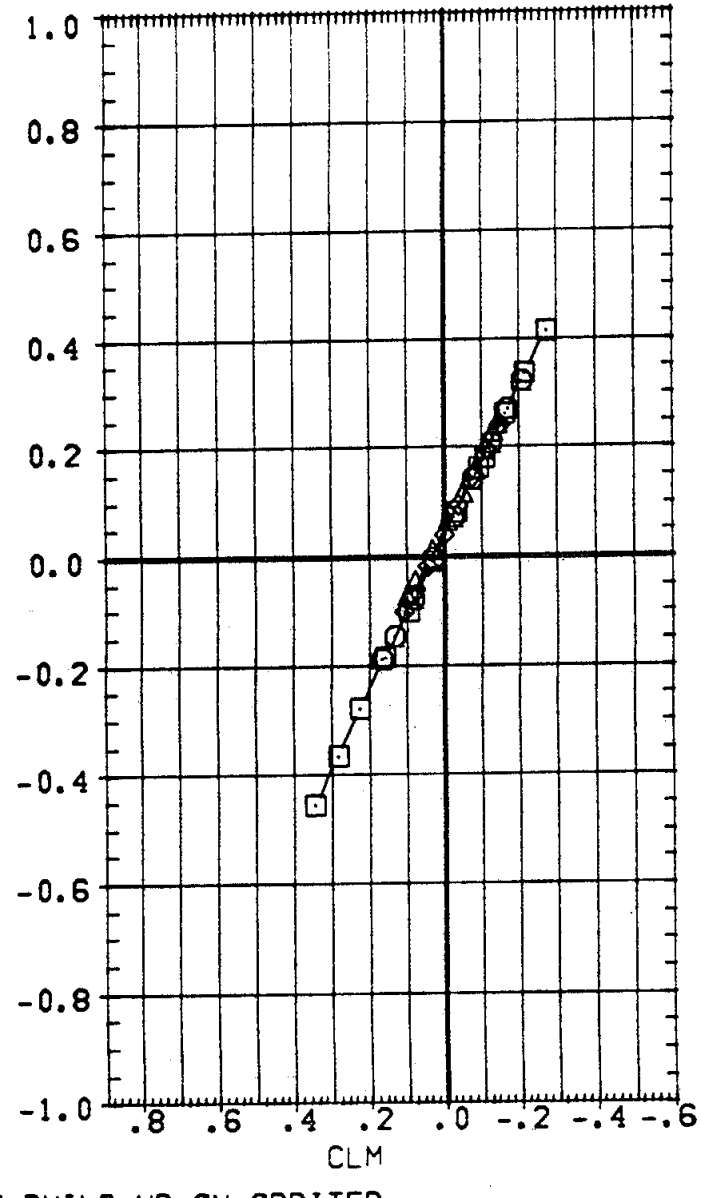
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72022)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72029)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72301)	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







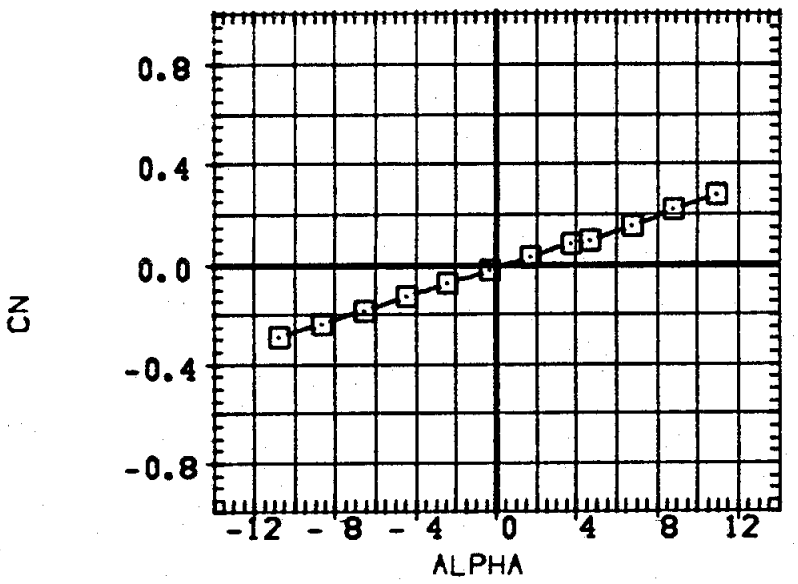
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

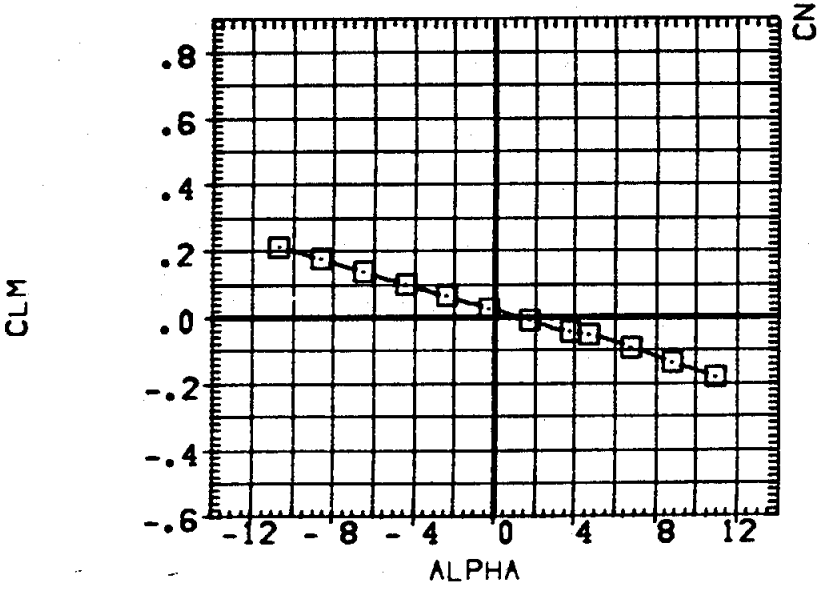
(F)MACH = 1.95

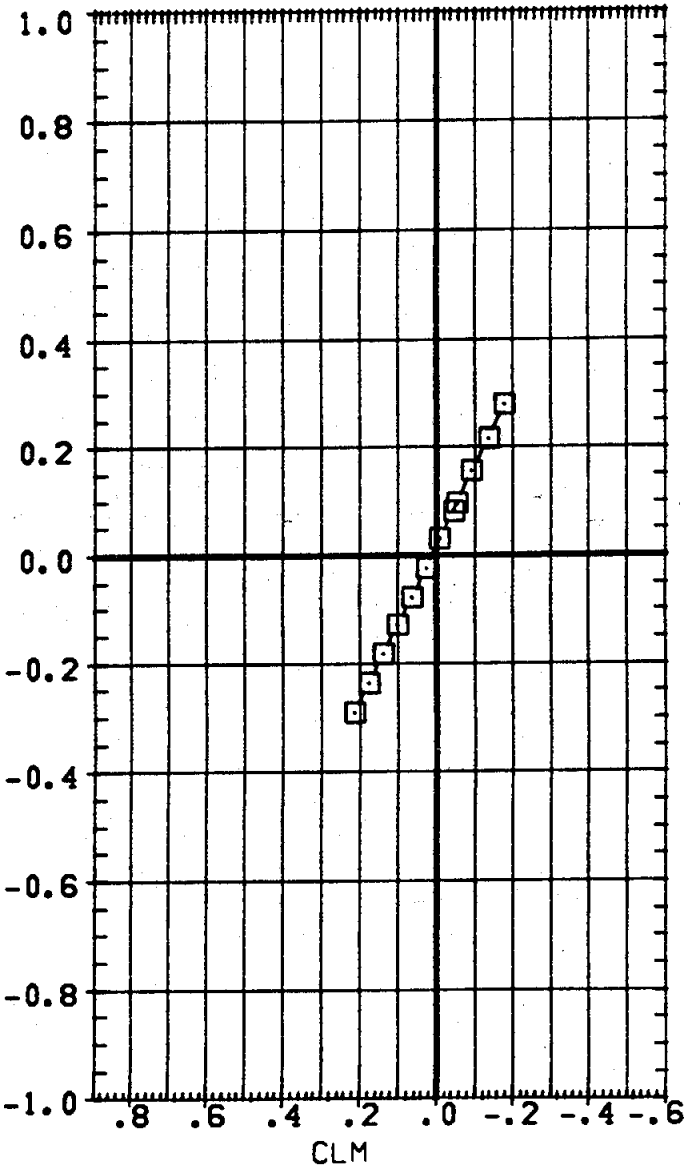
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	DATA NOT AVAILABLE
(A72022)	△	DATA NOT AVAILABLE
(A72029)	◇	DATA NOT AVAILABLE
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

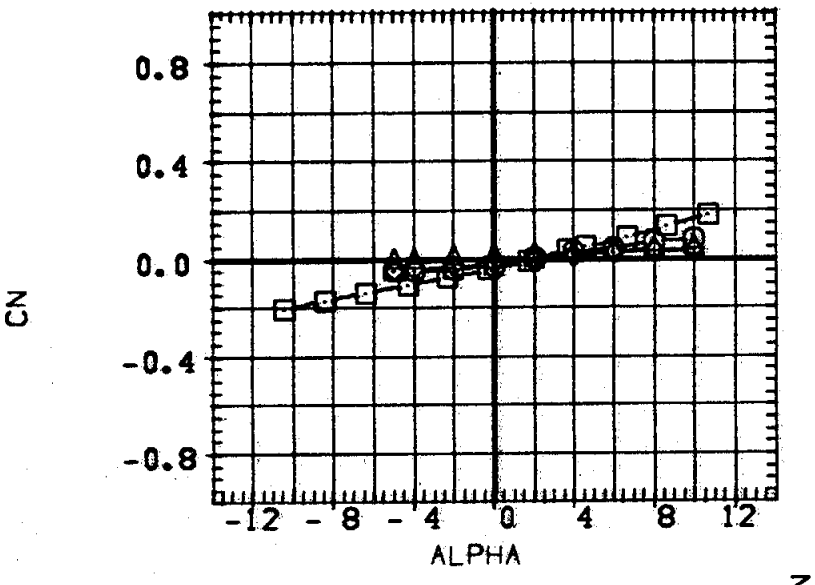
(G)MACH = 2.99

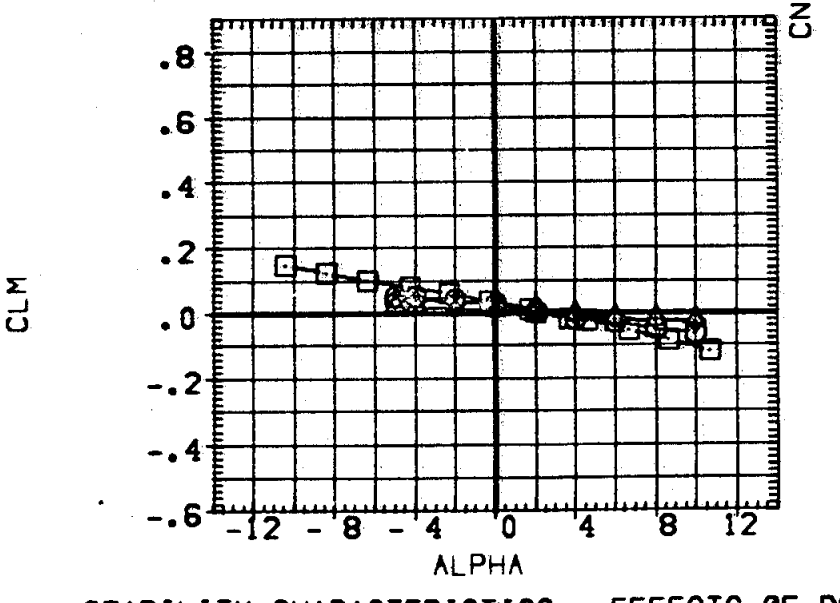
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72022)	⊠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72029)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

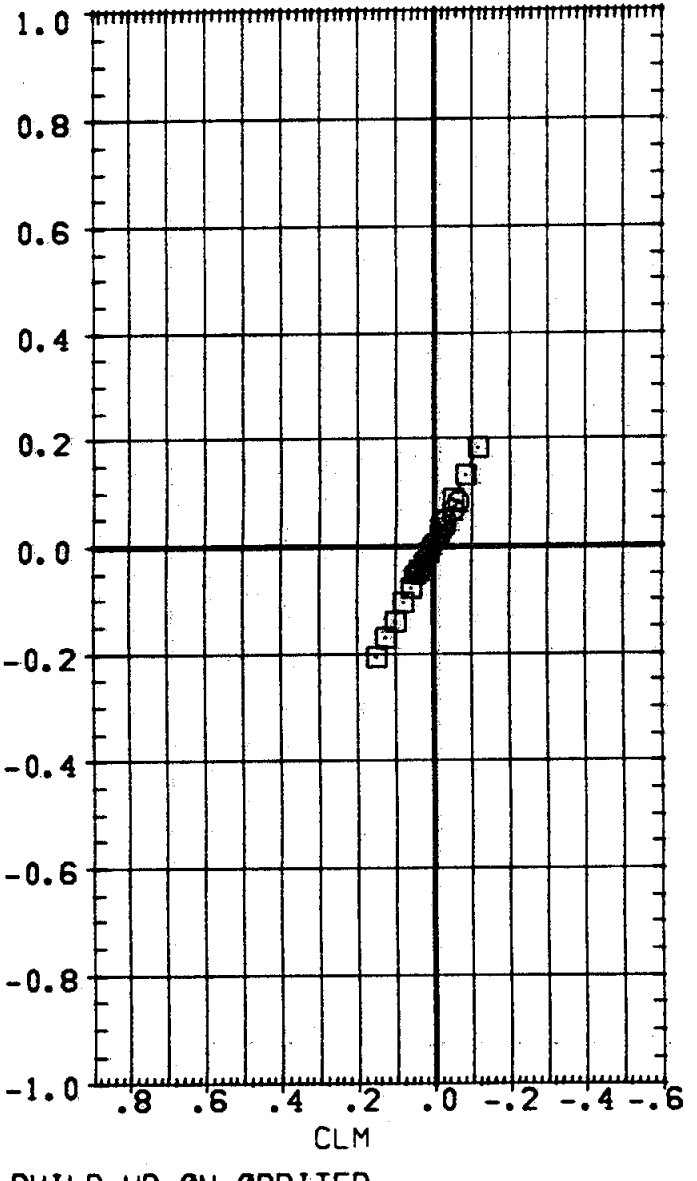
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





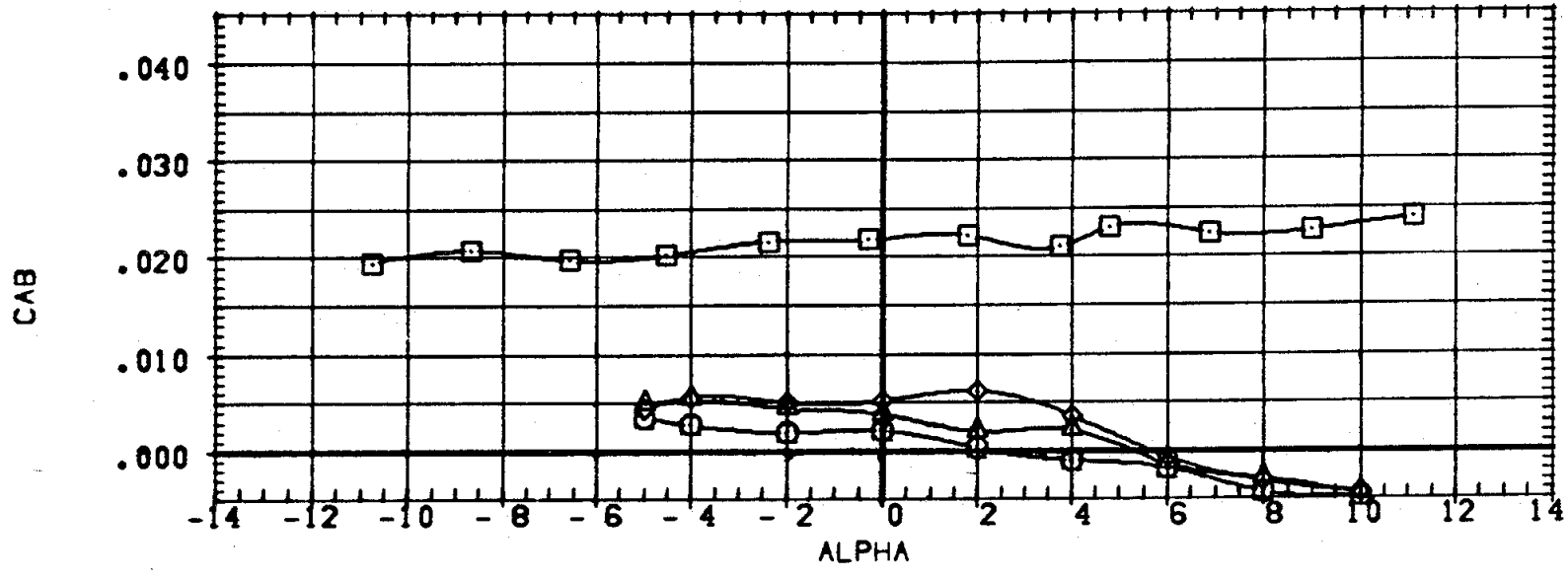


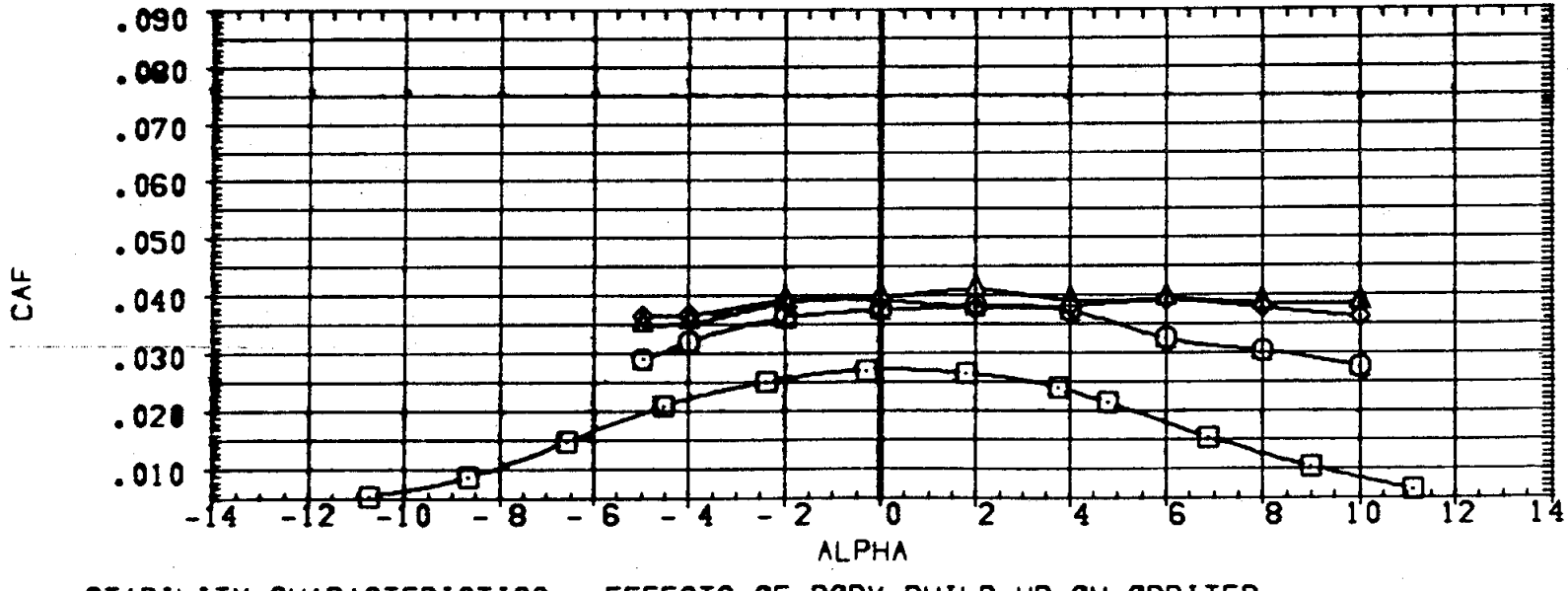
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(H)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72022)	△	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72029)	◇	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	-.624
(A72501)	□	HSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





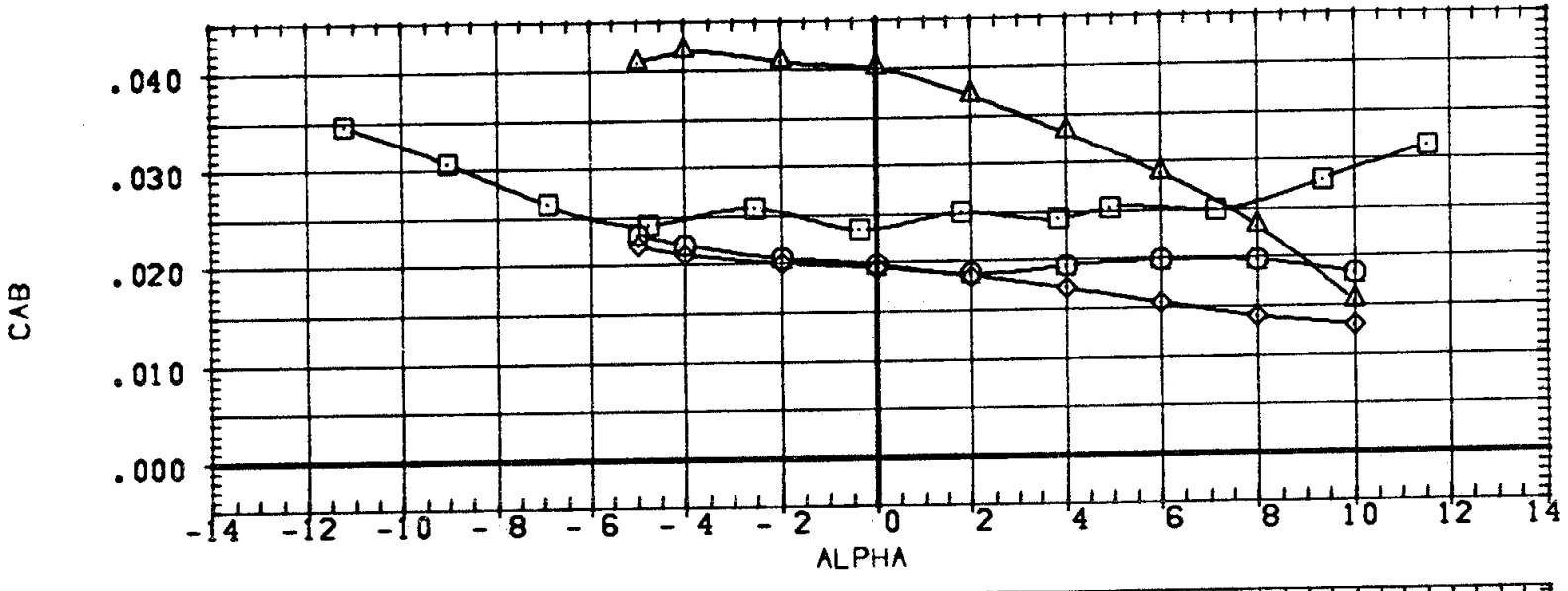
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

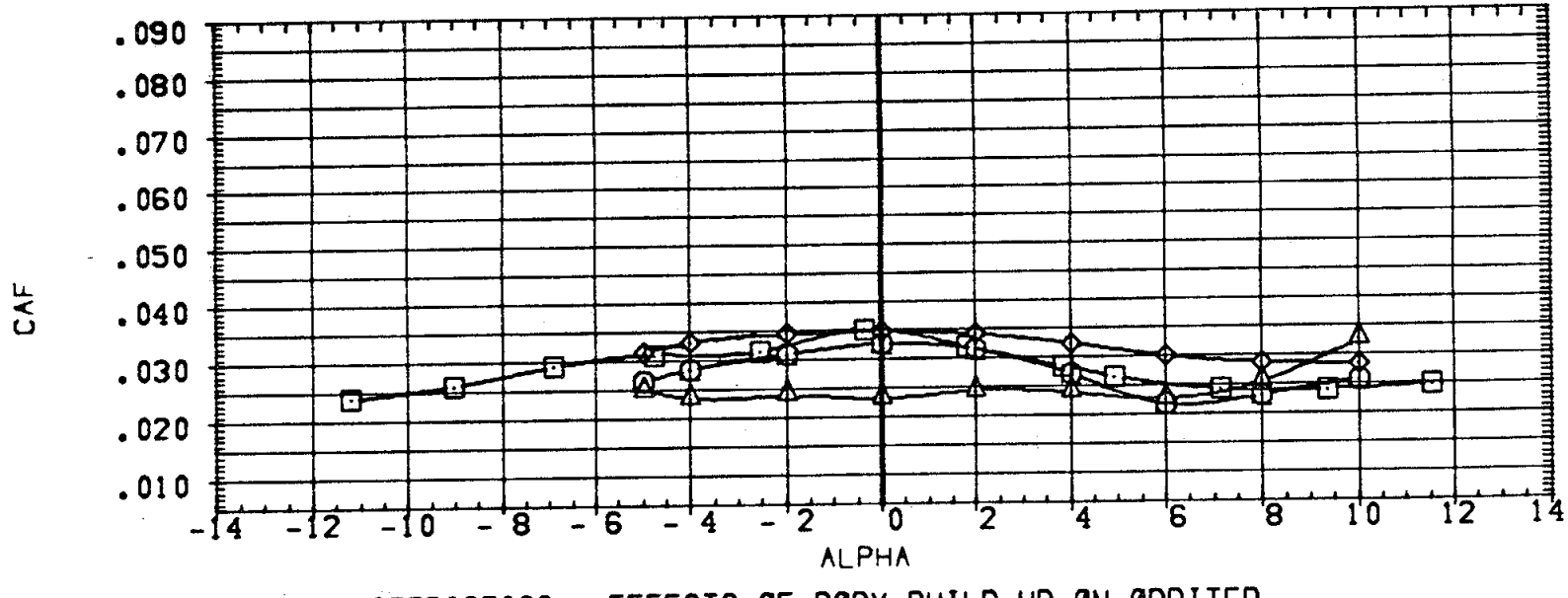
(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72022)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72029)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	-.624
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



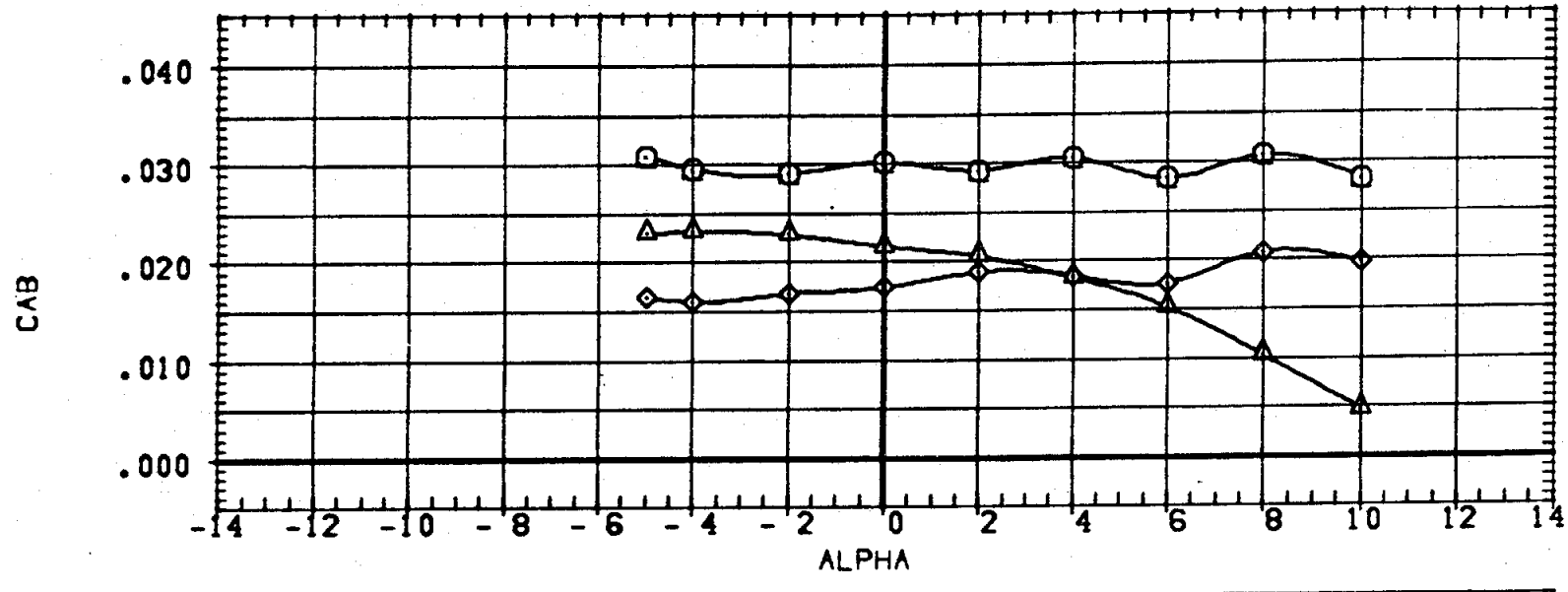


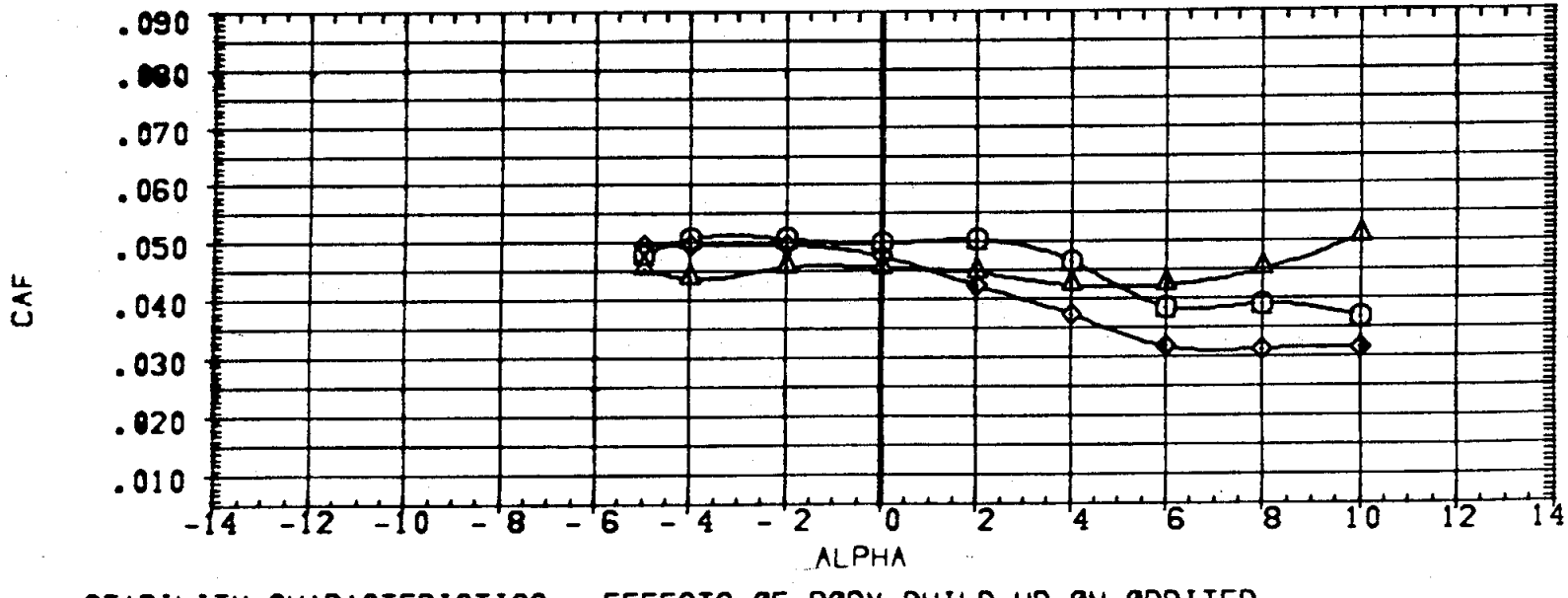
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72022)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72029)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	-.624
(A72501)	□	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3280.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





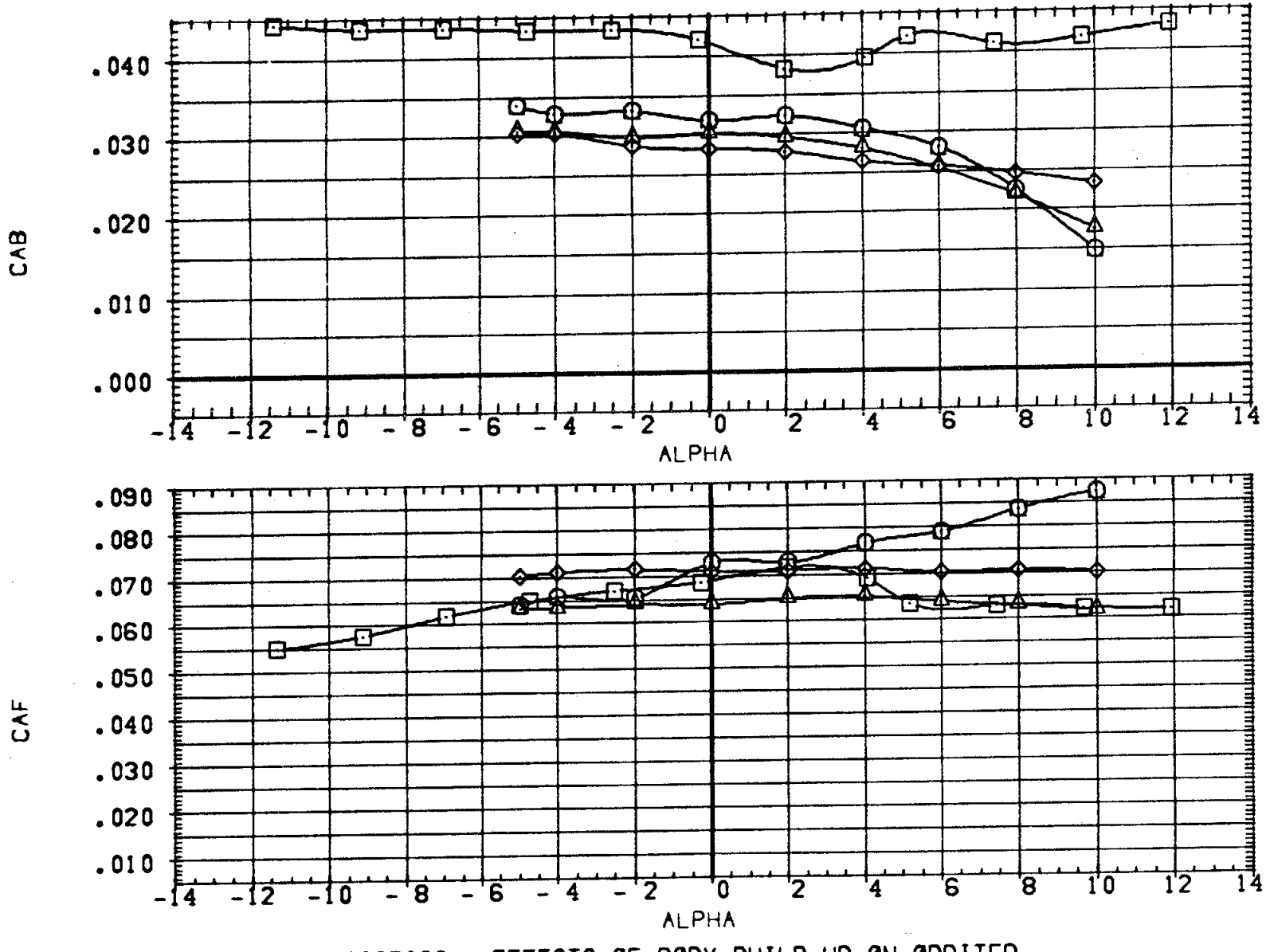
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)
(A72022)	△	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1)
(A72029)	◇	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



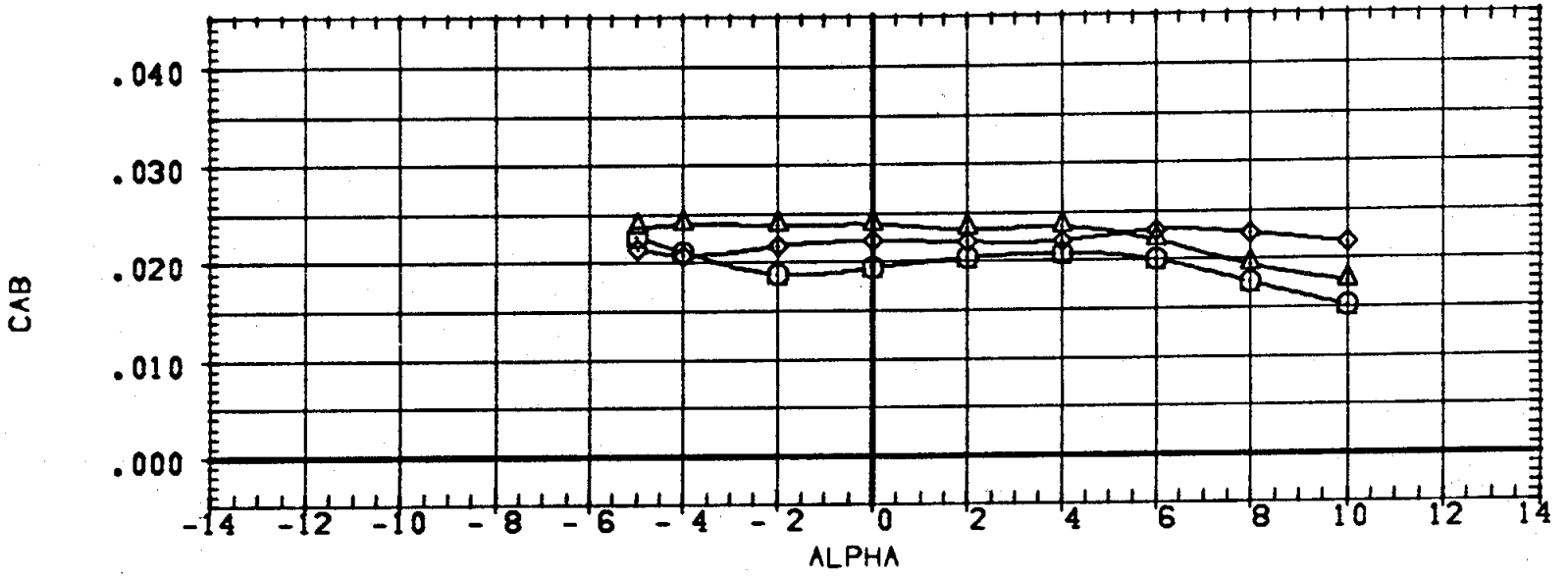
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

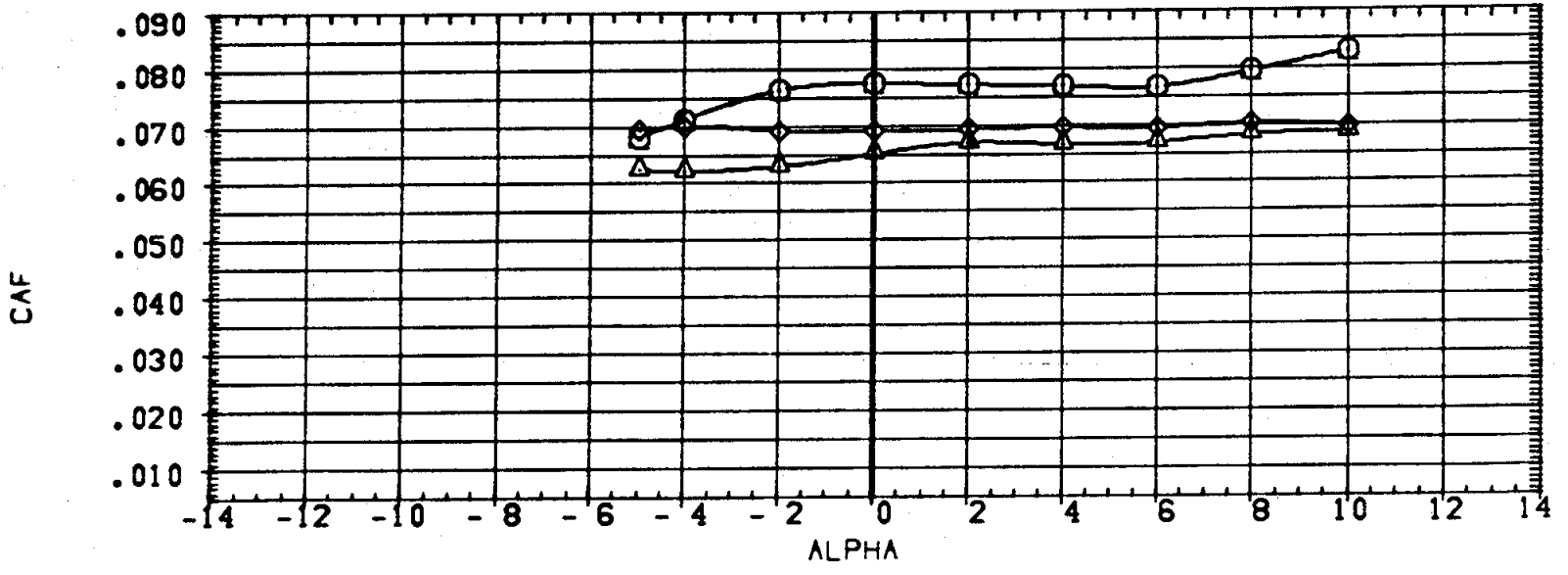
(□)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	.000	.120	10.000	
(A72022)	⊠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	.000	.120	10.000	-.624
(A72029)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	.000	.120	10.000	-.624
(A72501)	□	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

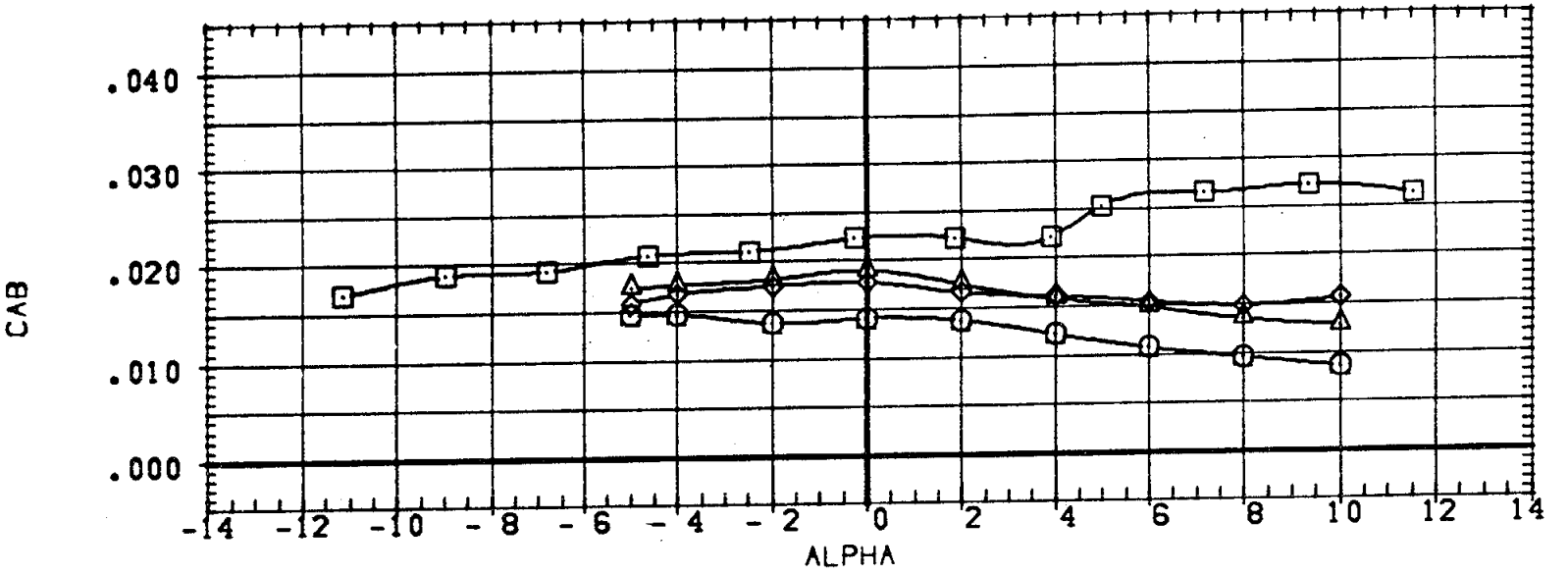
(E)MACH = 1.46

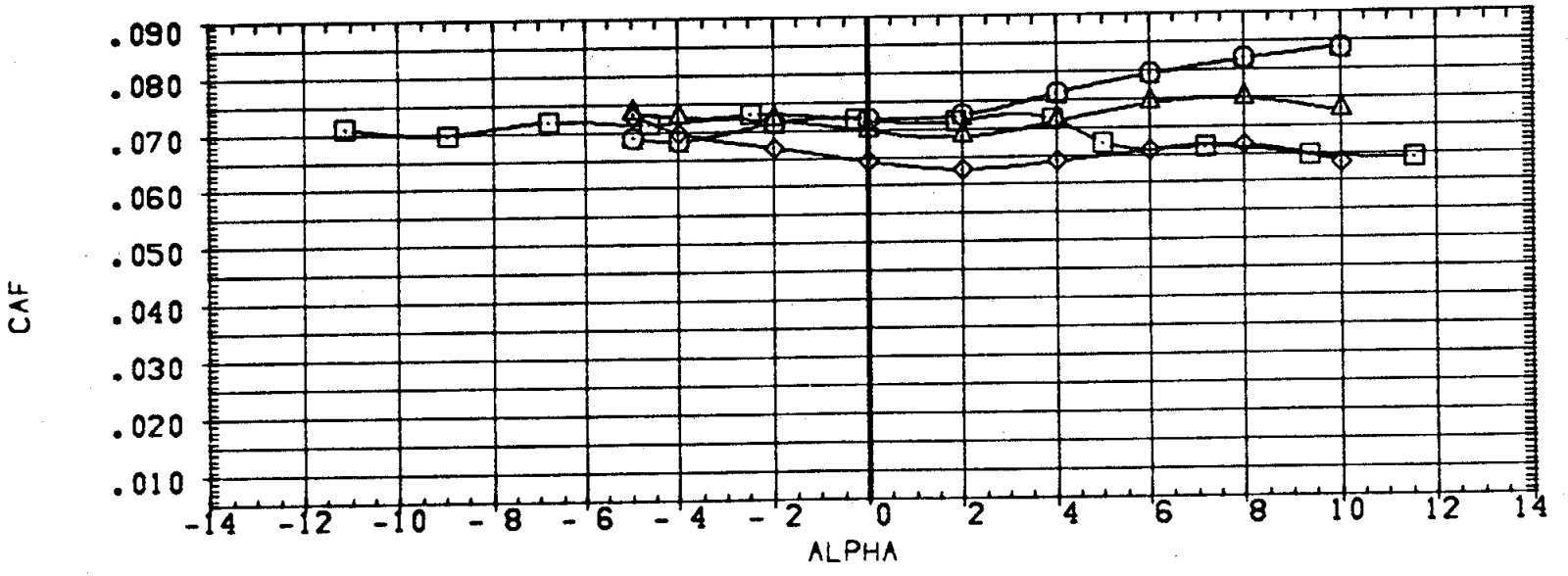
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)
(A72022)	△	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72029)	◇	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC S4S (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





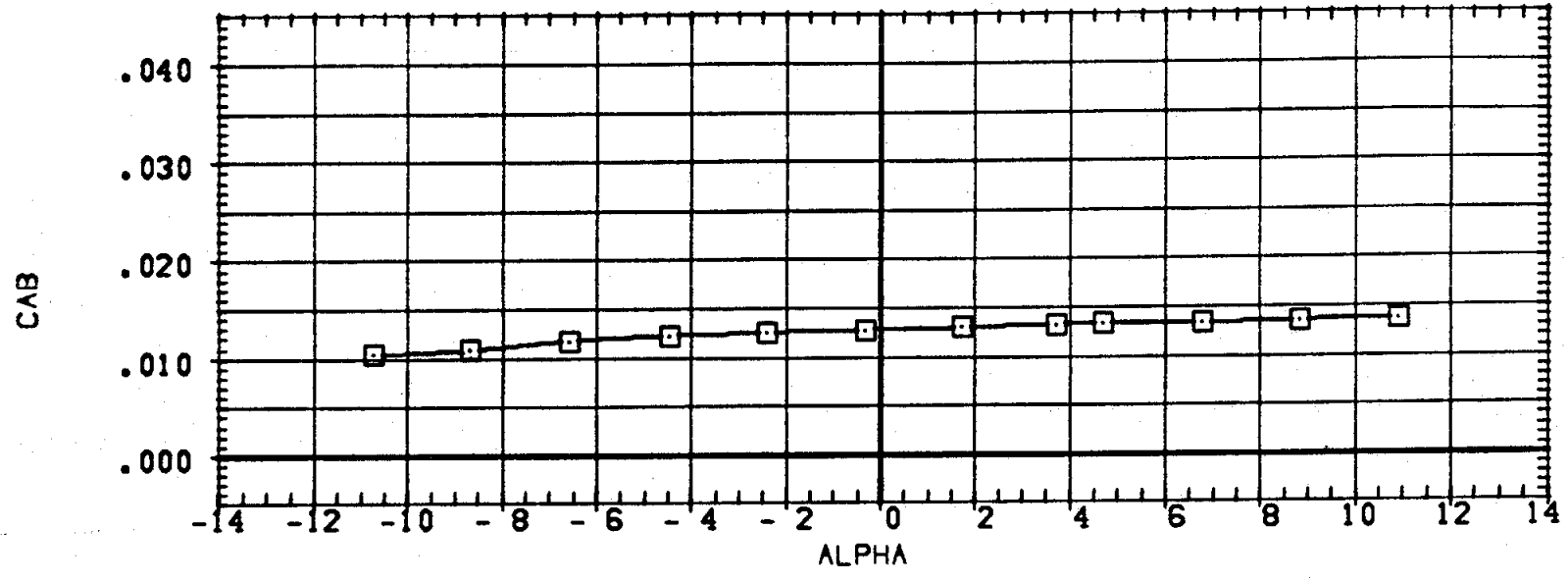
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

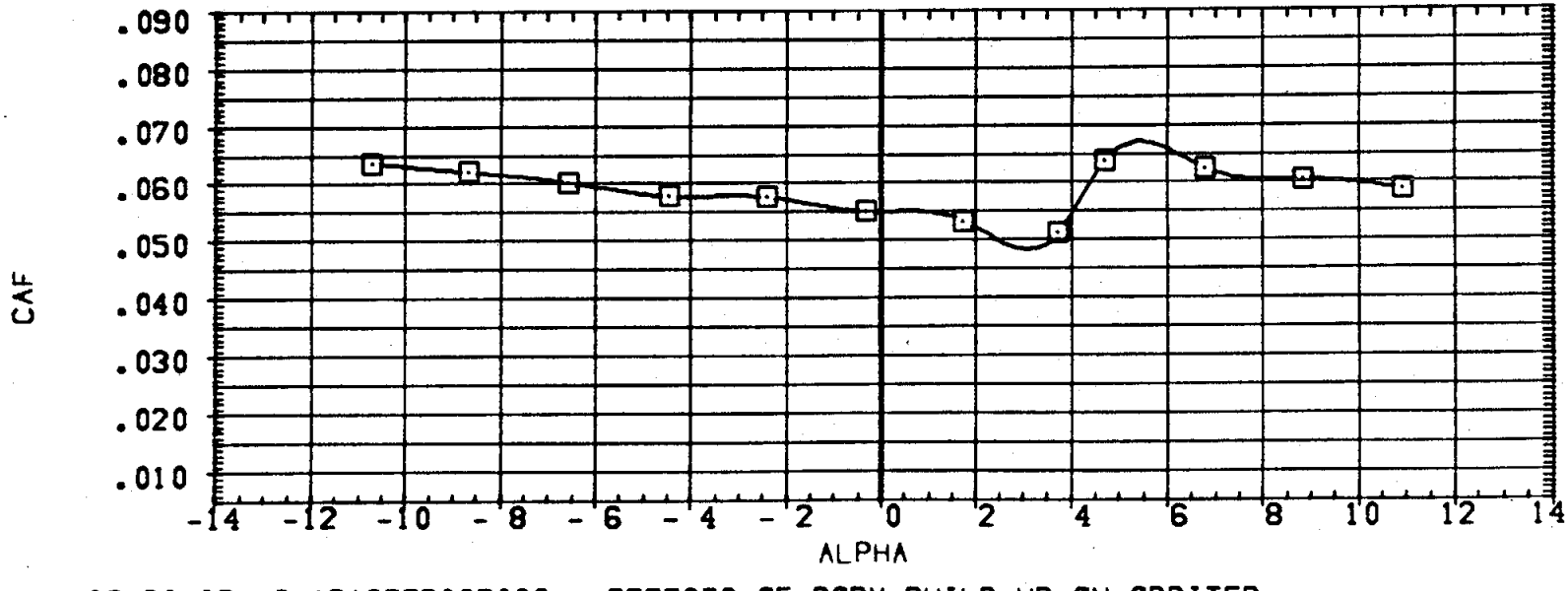
(F)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	DATA NOT AVAILABLE
(A72022)	⊠	DATA NOT AVAILABLE
(A72028)	◇	DATA NOT AVAILABLE
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





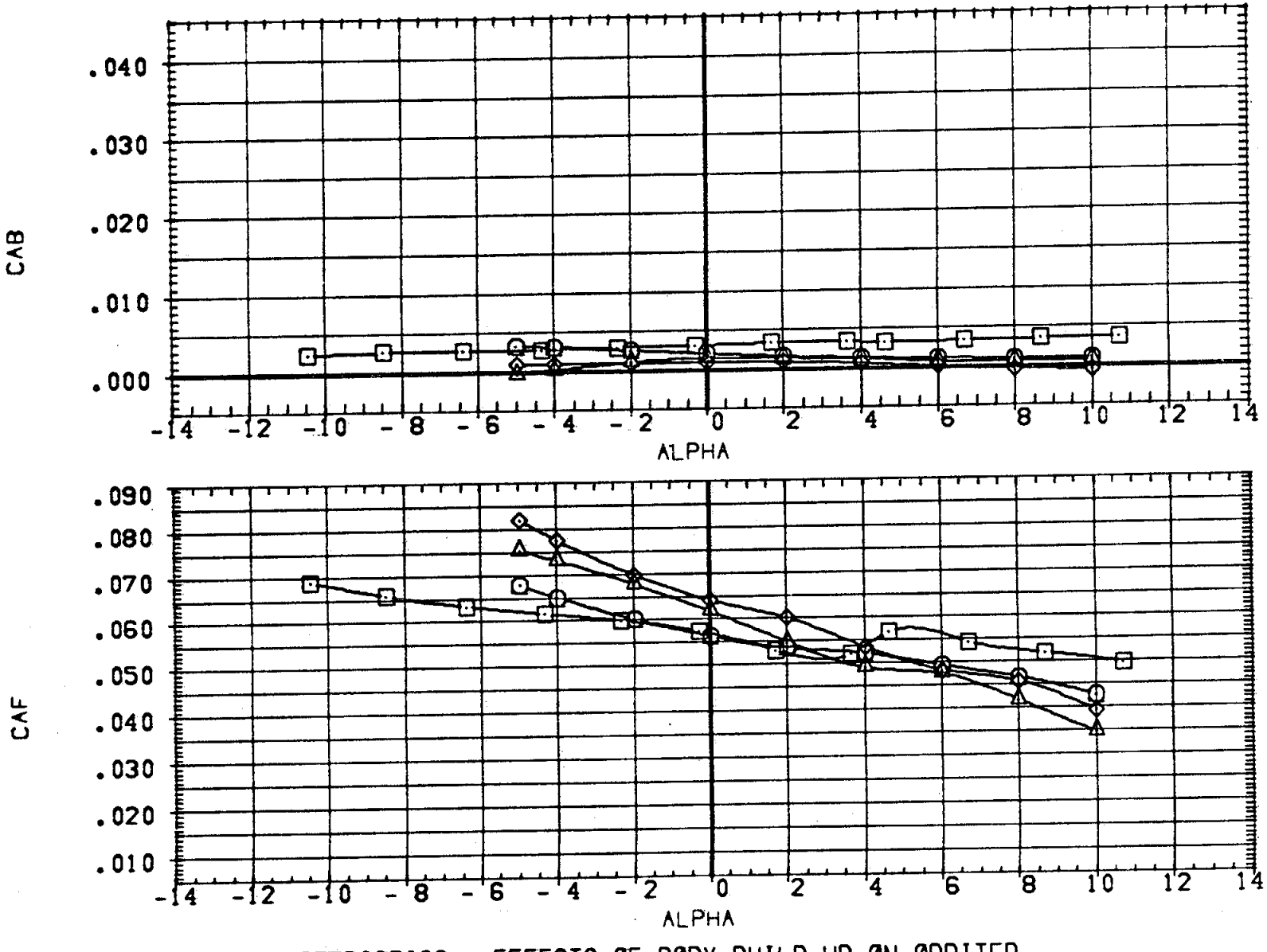
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(G)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72001)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72022)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72029)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



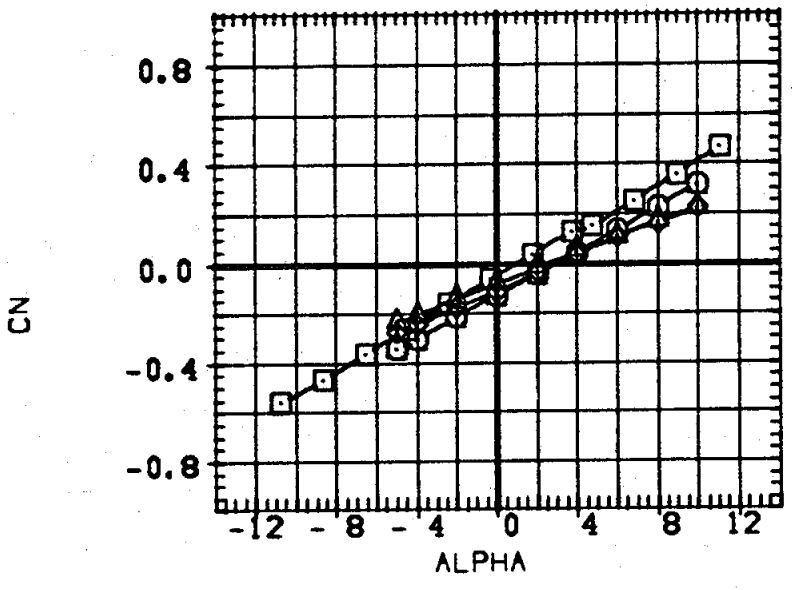
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

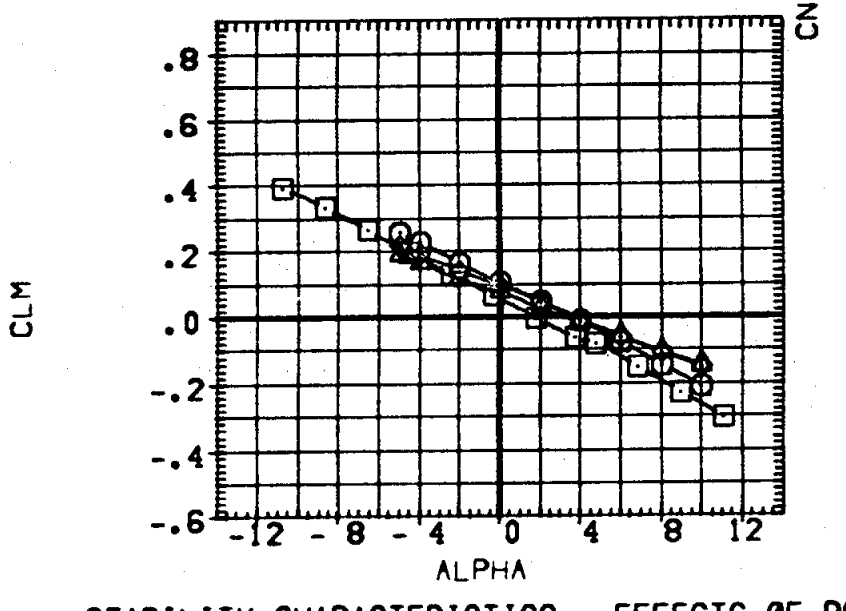
(H)MACH = 4.96

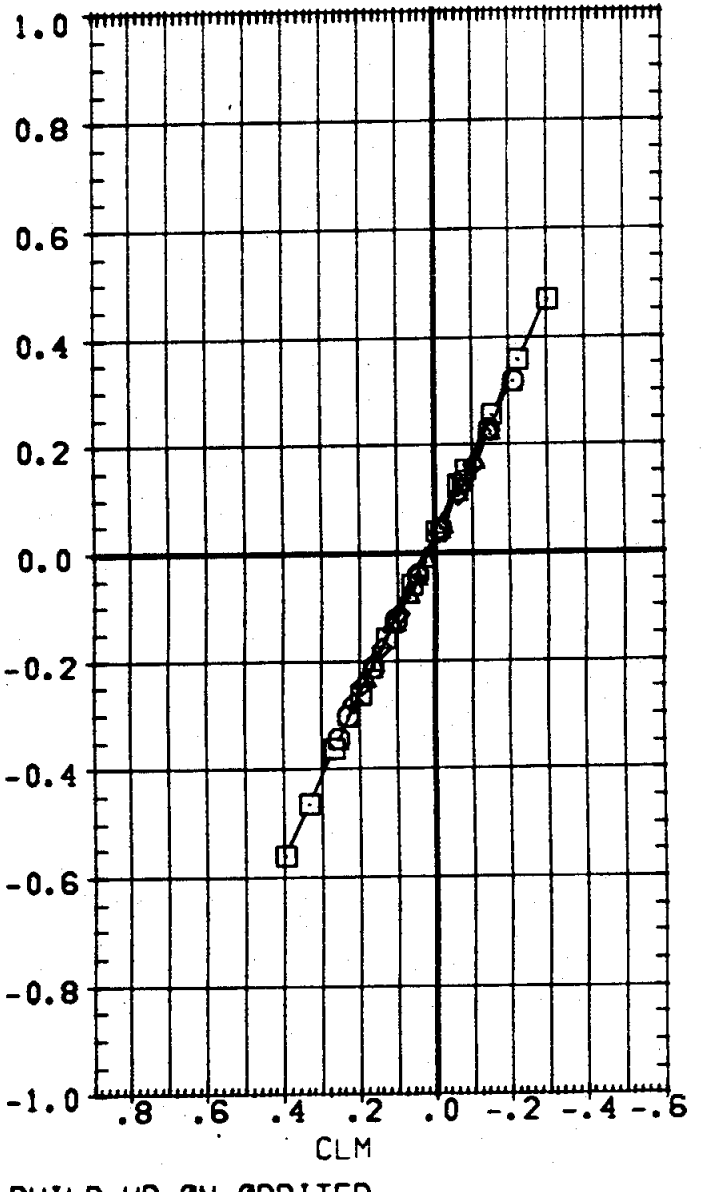
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72030)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







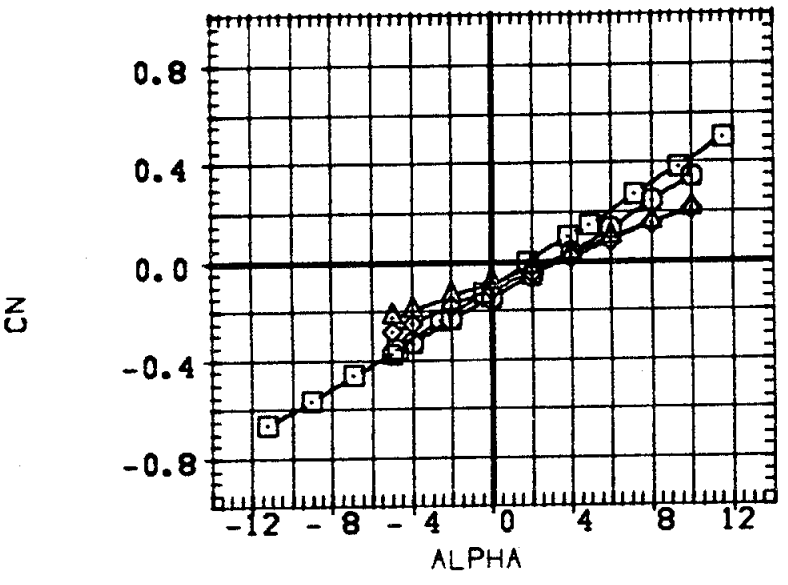
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

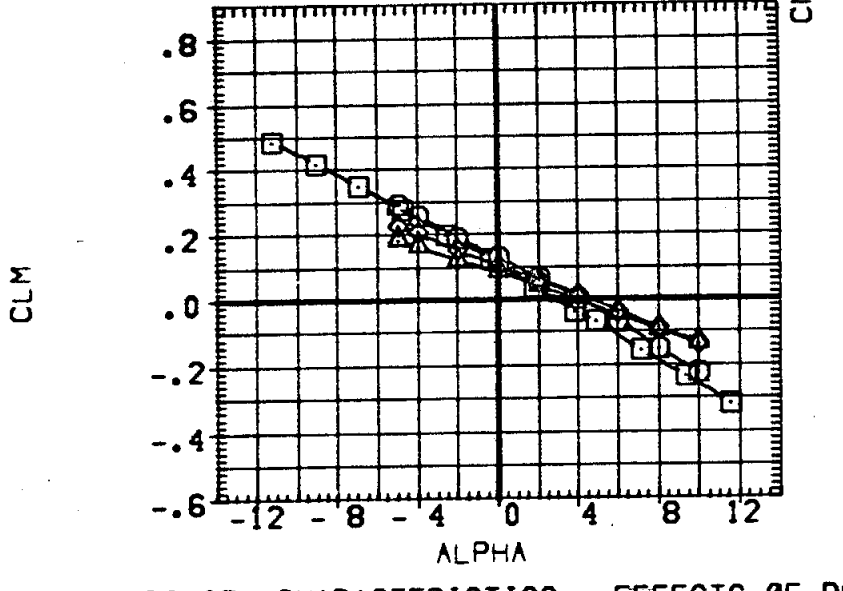
(A)MACH = .60

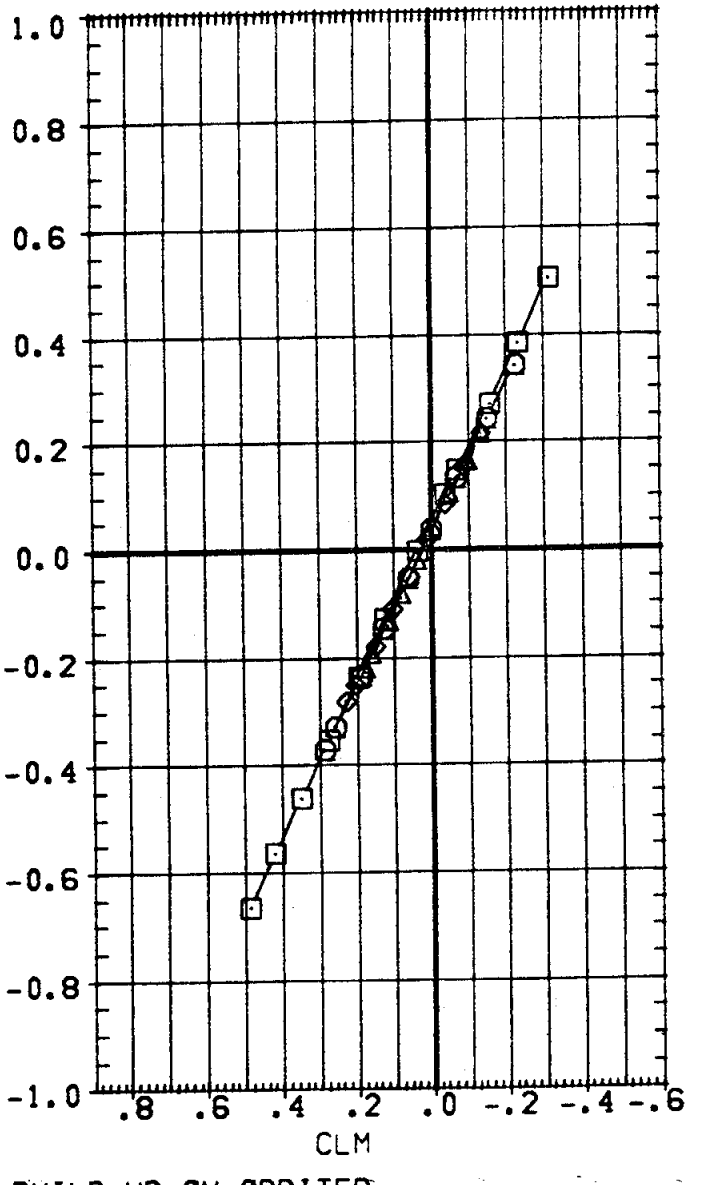
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72030)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







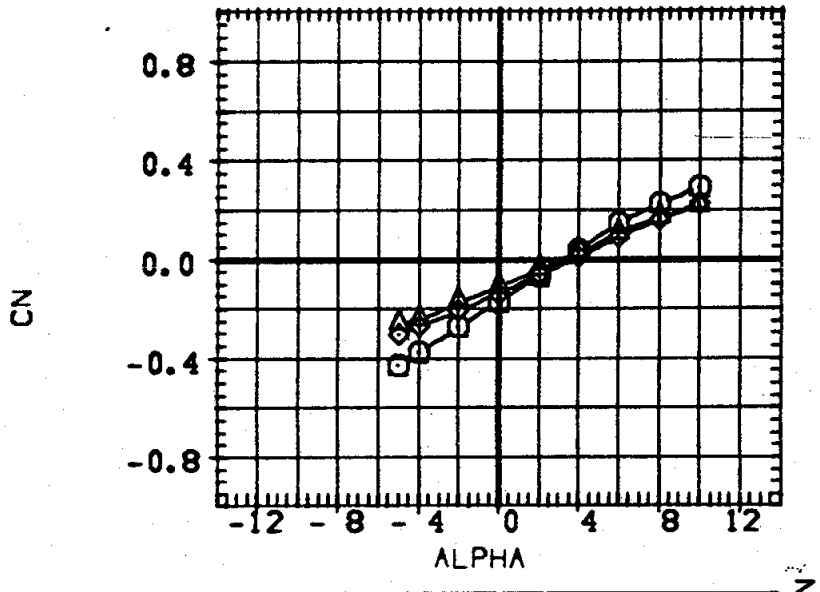
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

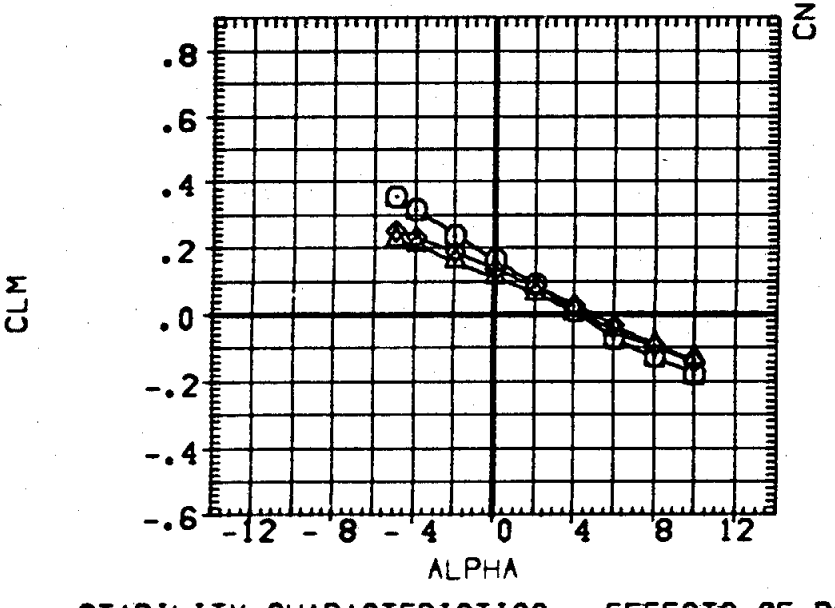
(B)MACH = .90

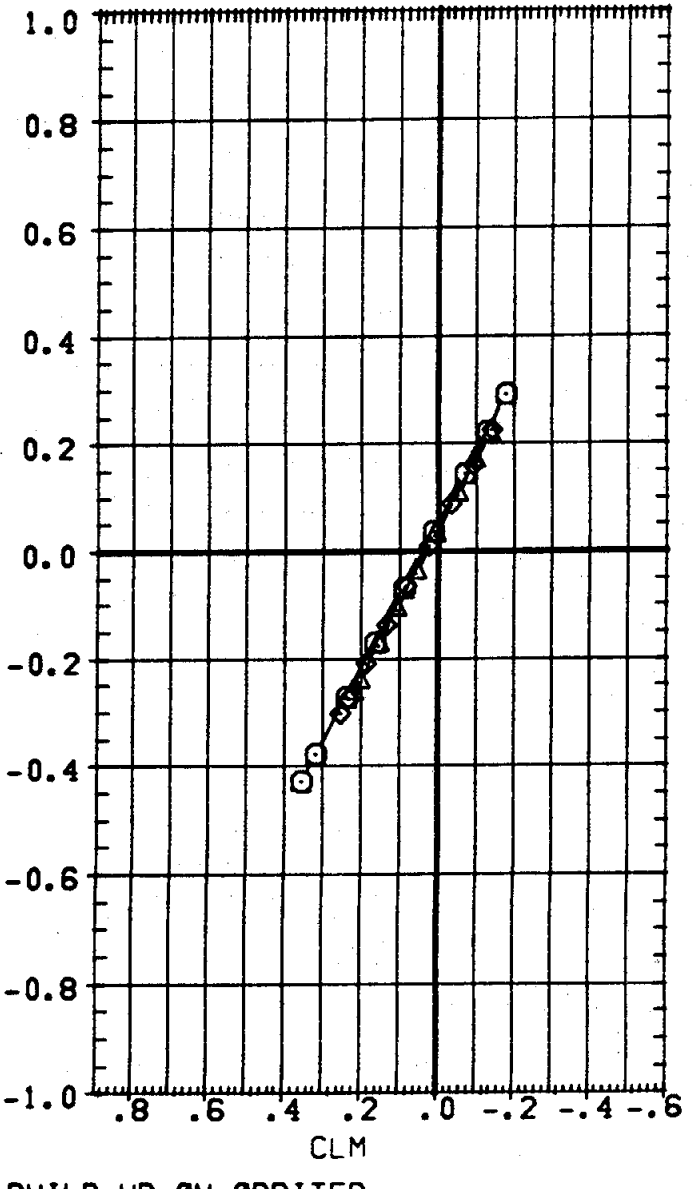
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72030)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







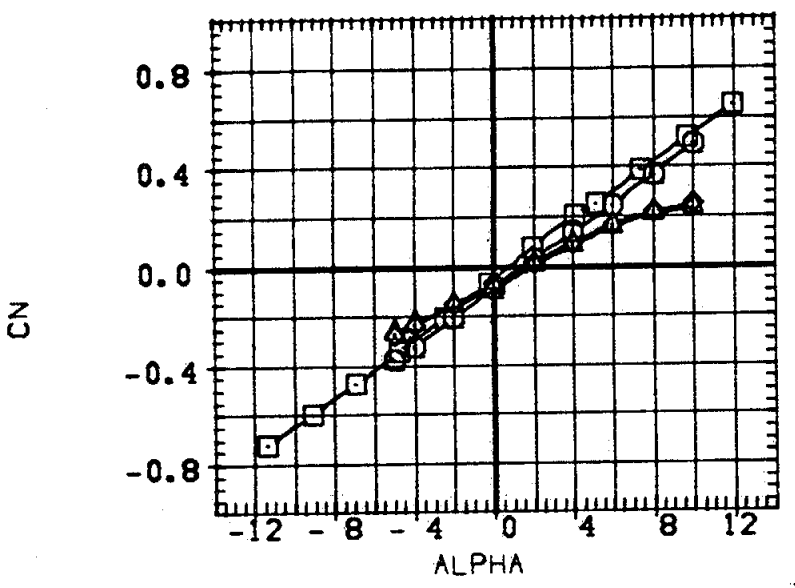
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

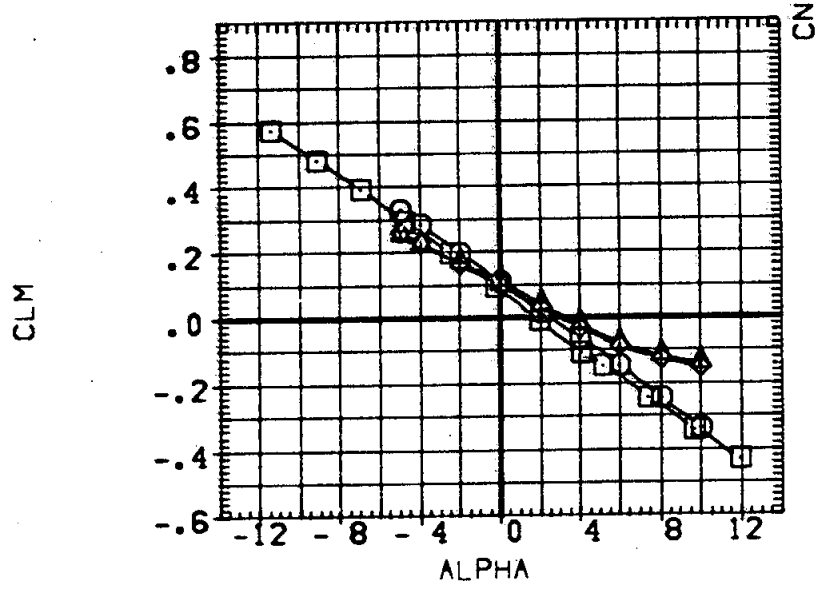
(C)MACH = .99

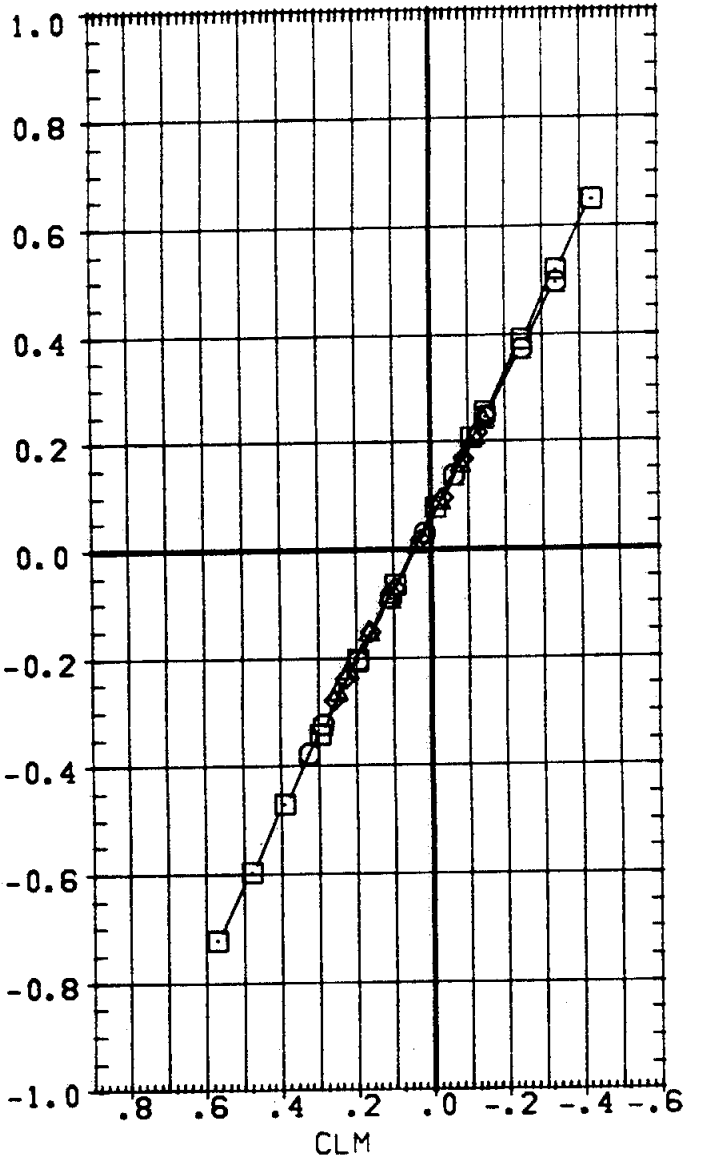
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)
(A72023)	△	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1)
(A72030)	◇	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







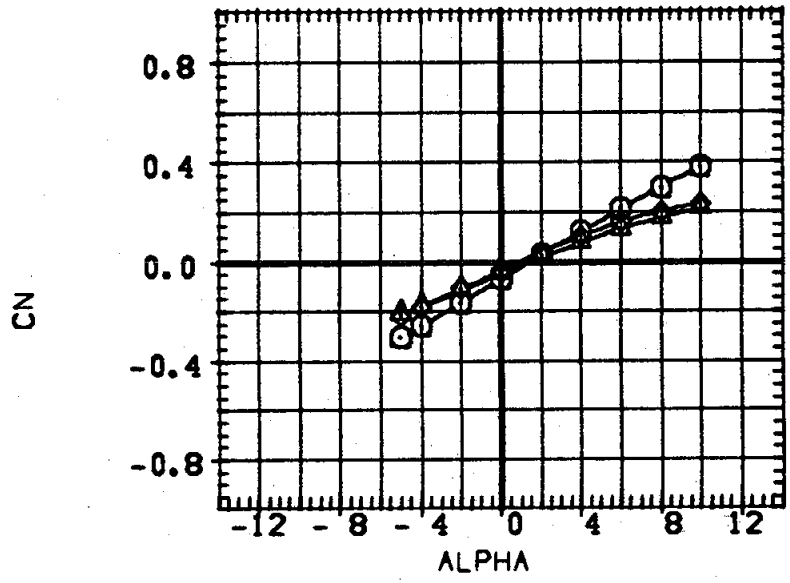
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

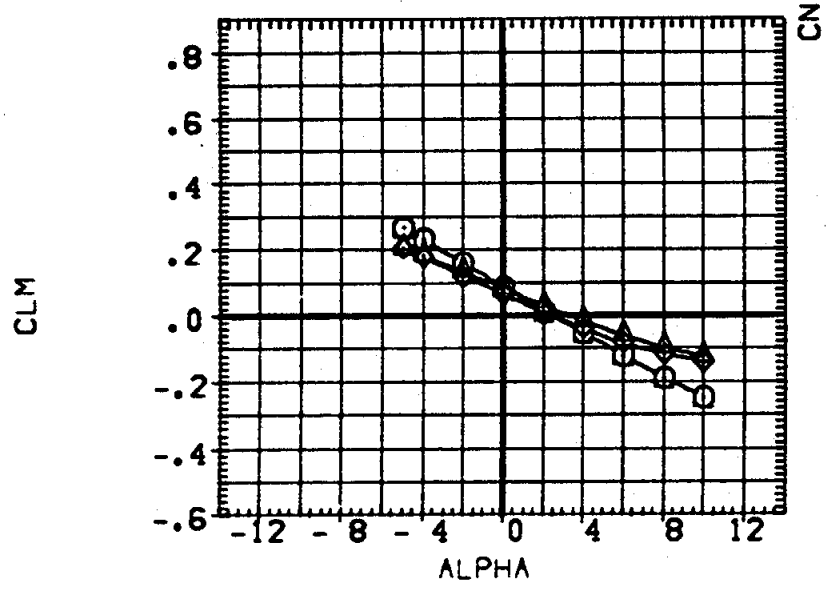
(D)MACH = 1.20

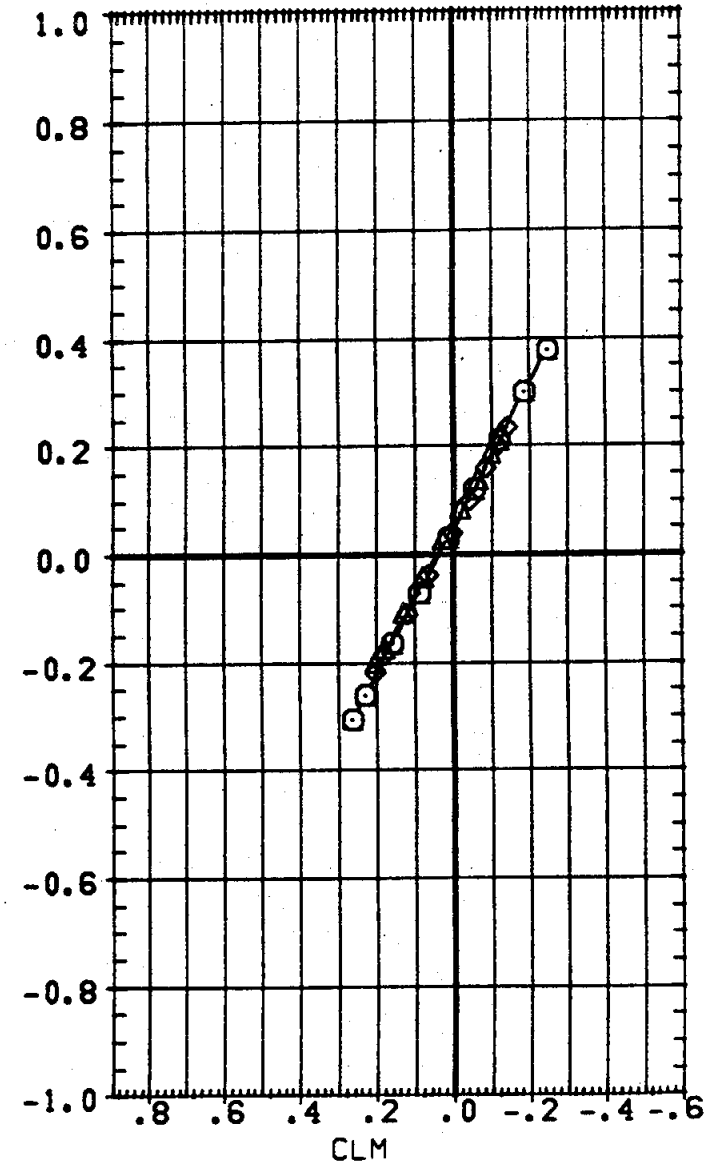
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)
(A72025)	△	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72030)	◇	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







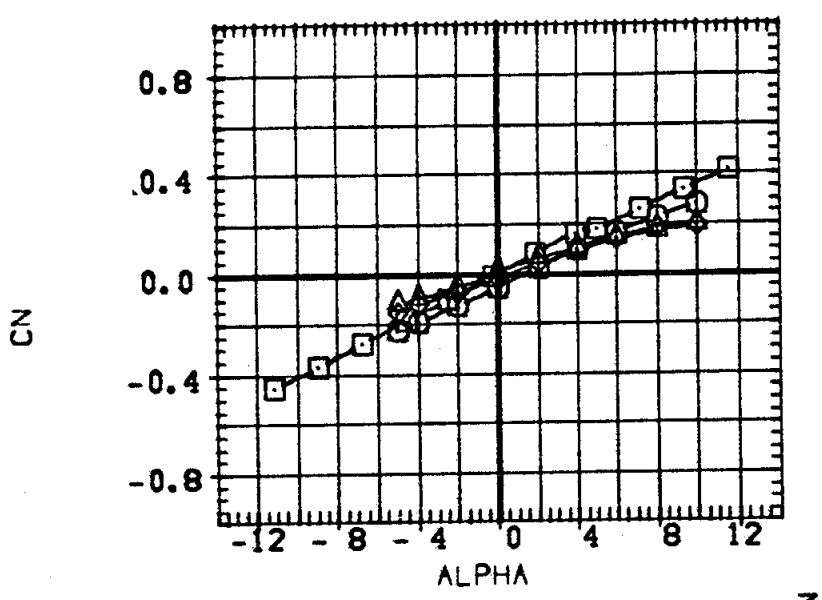
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

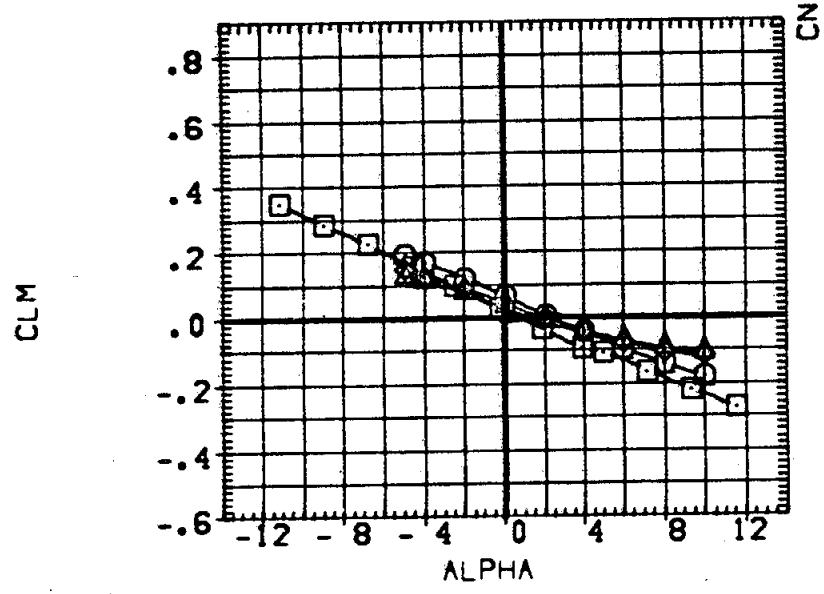
(E)MACH = 1.46

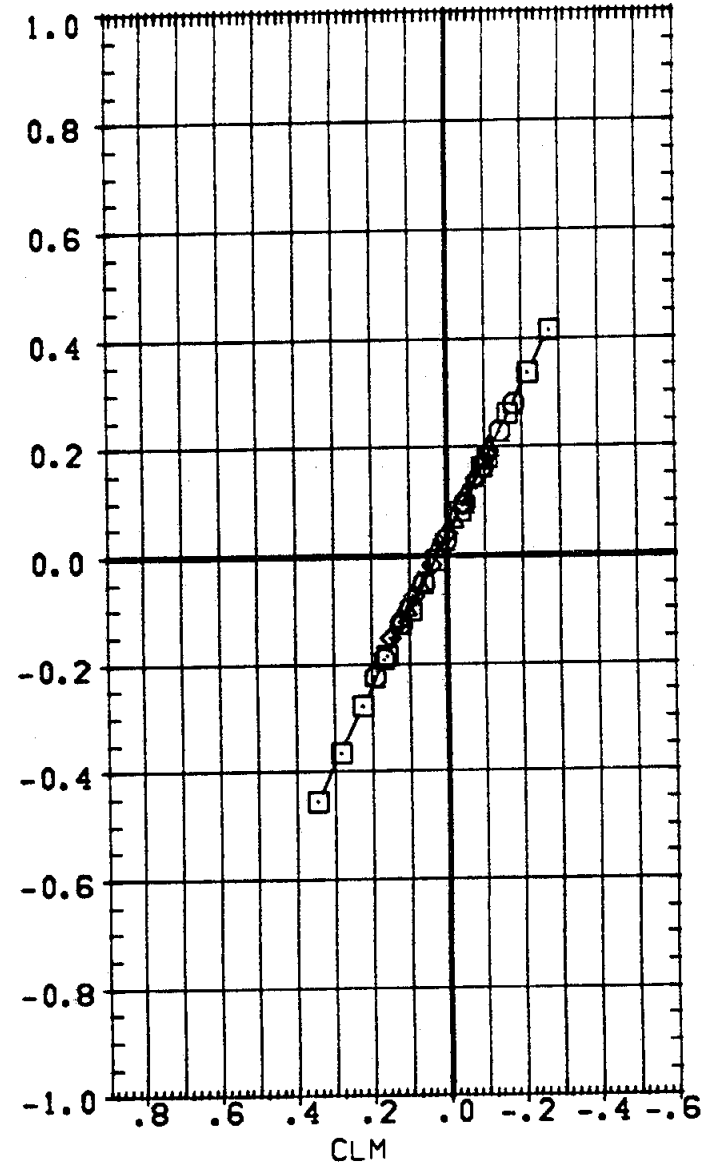
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72023)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72030)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

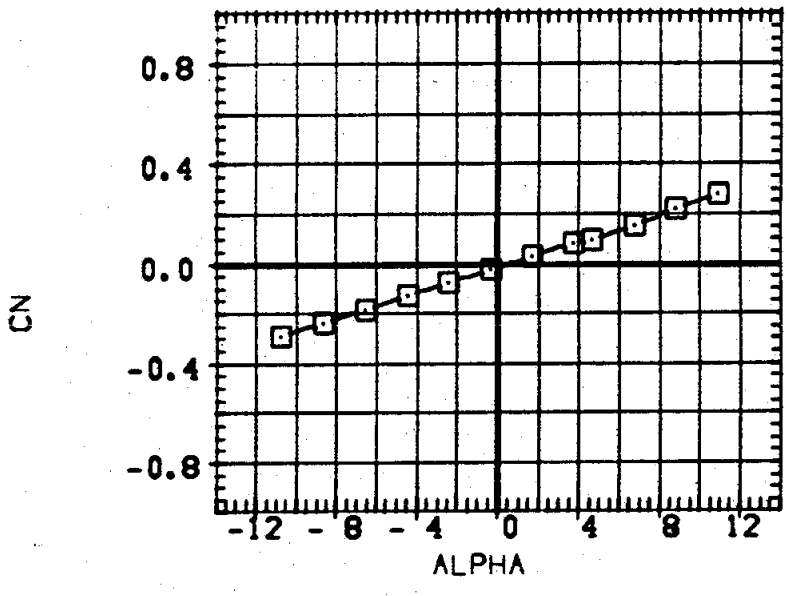
(F)MACH = 1.95

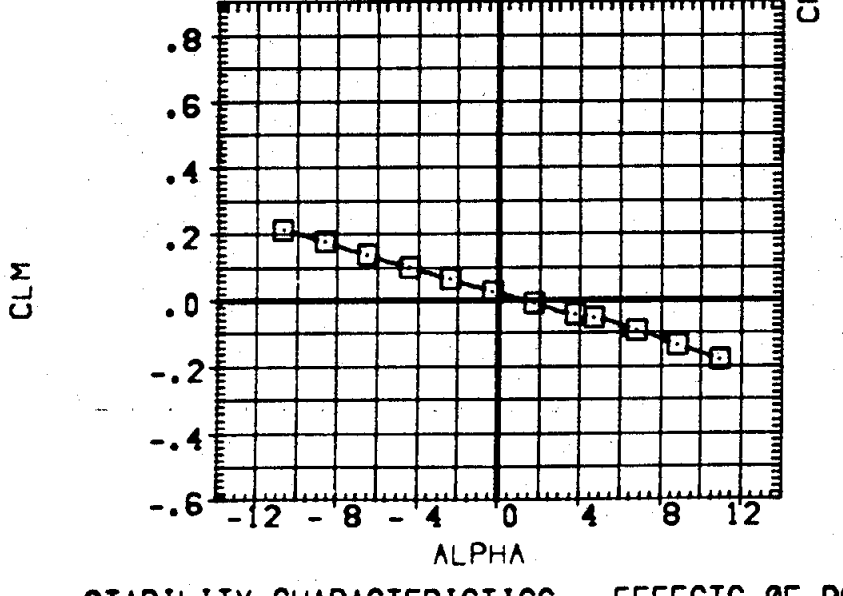
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	DATA NOT AVAILABLE
(A72023)	⊠	DATA NOT AVAILABLE
(A72030)	◇	DATA NOT AVAILABLE
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

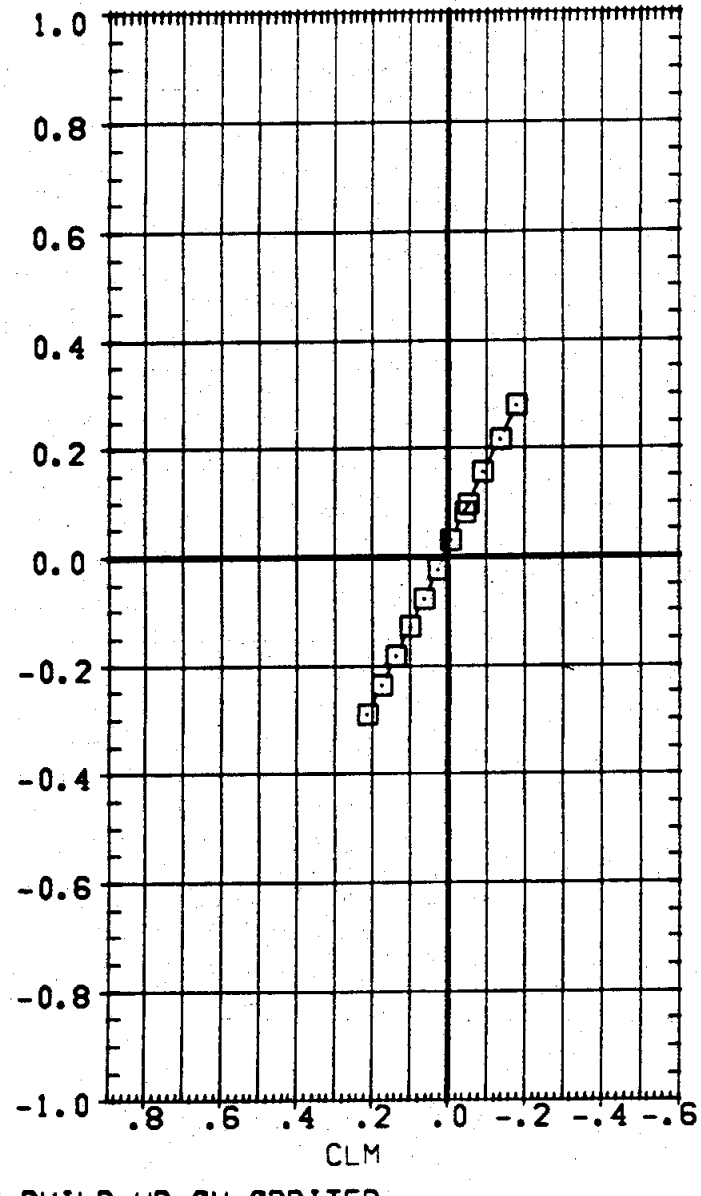
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMA'

SREF	3220.0000	Sq.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







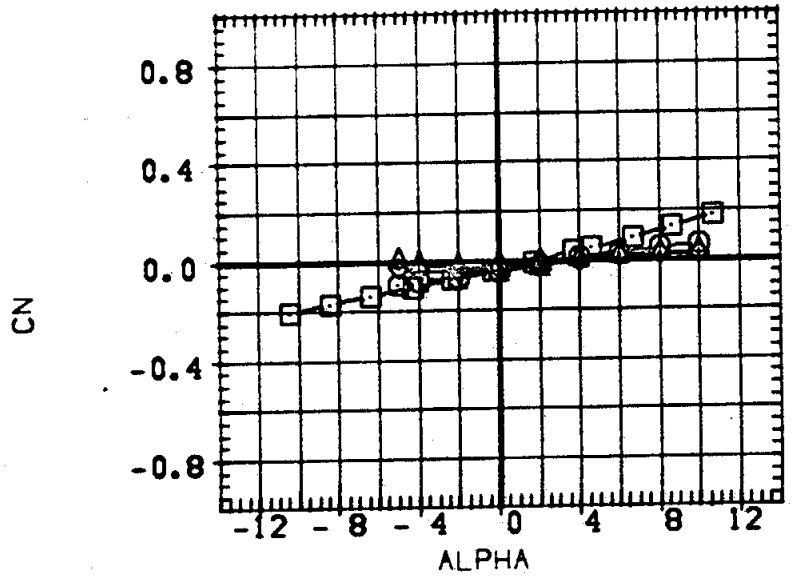
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

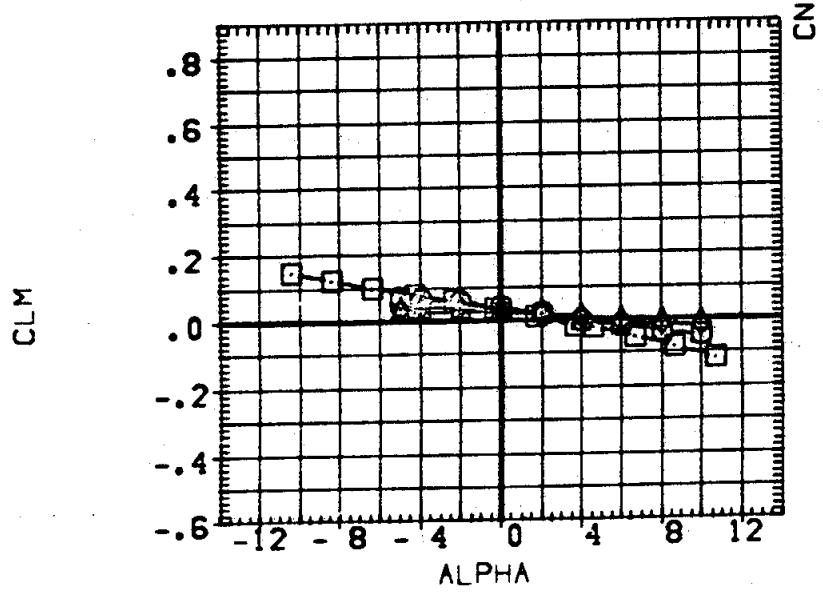
(G)MACH = 2.99

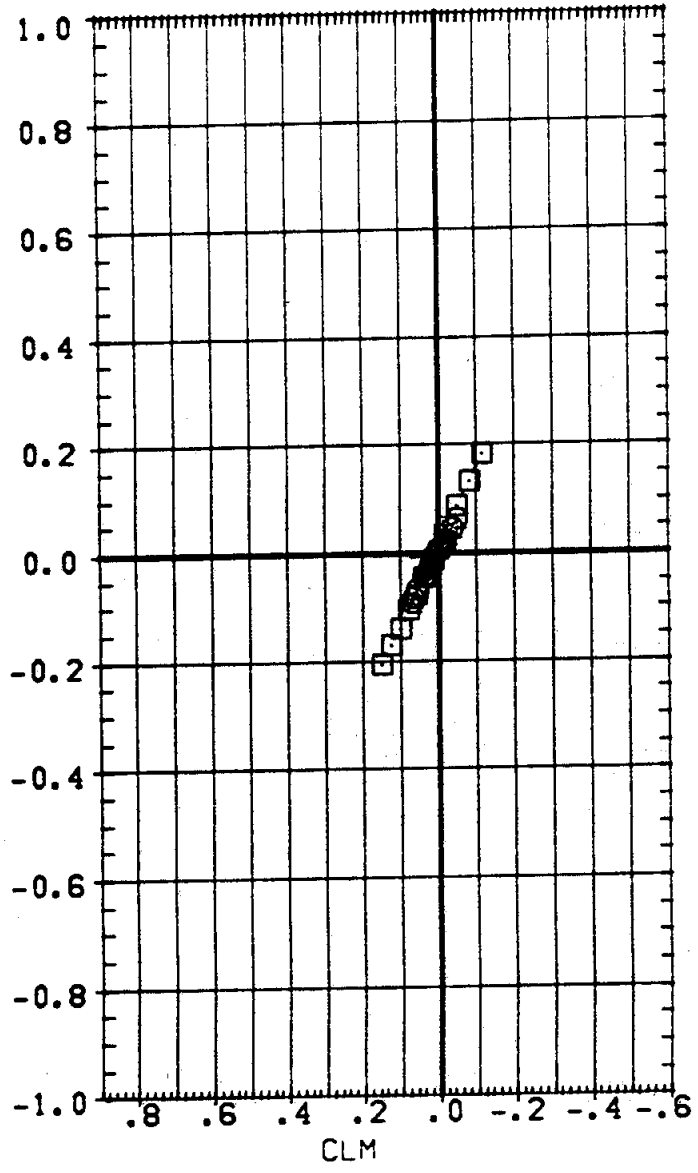
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)
(A72030)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)
(A72301)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





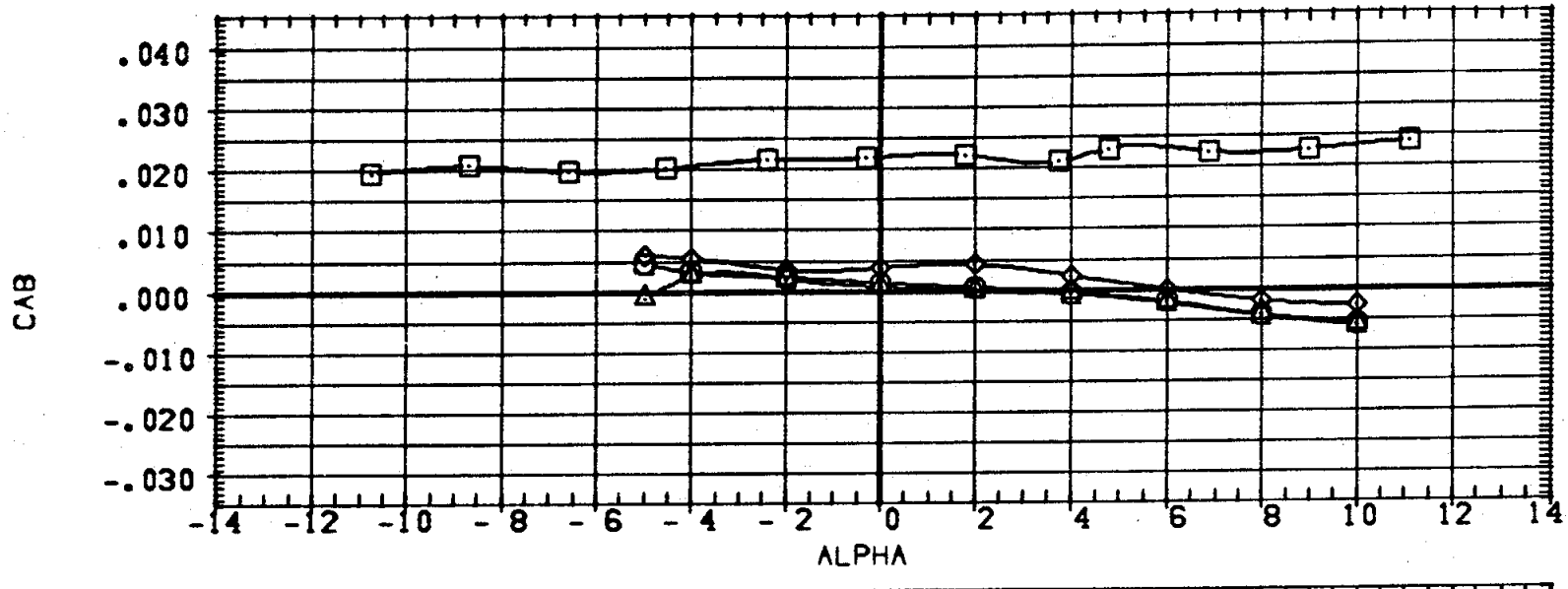


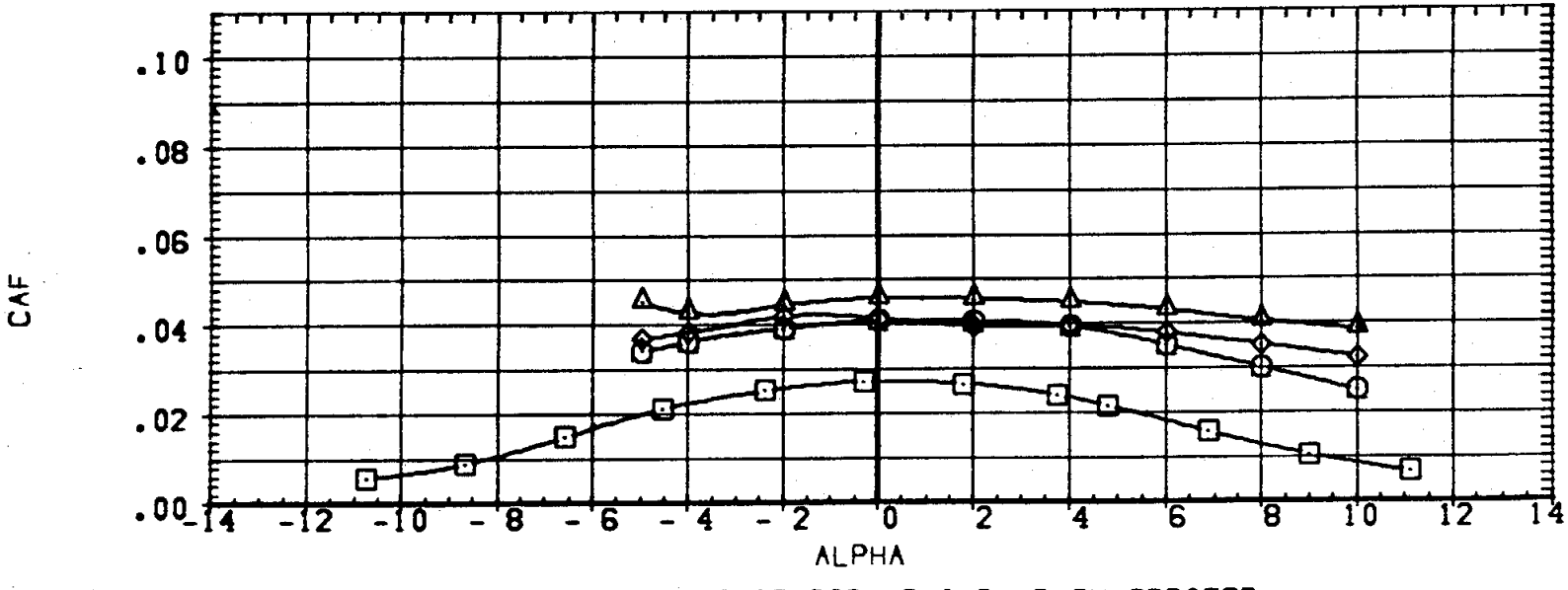
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(-)MAC- = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72023)	⊠	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72030)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	-.624
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

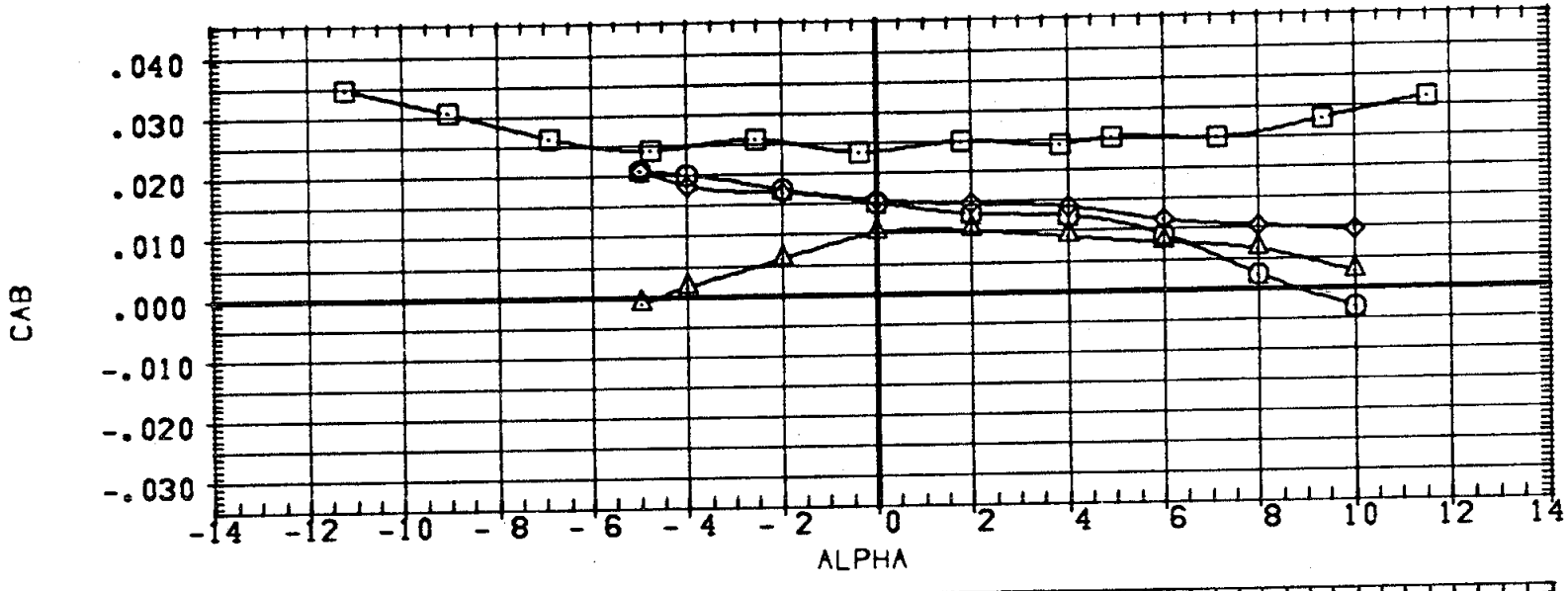
(A)MACH = .60

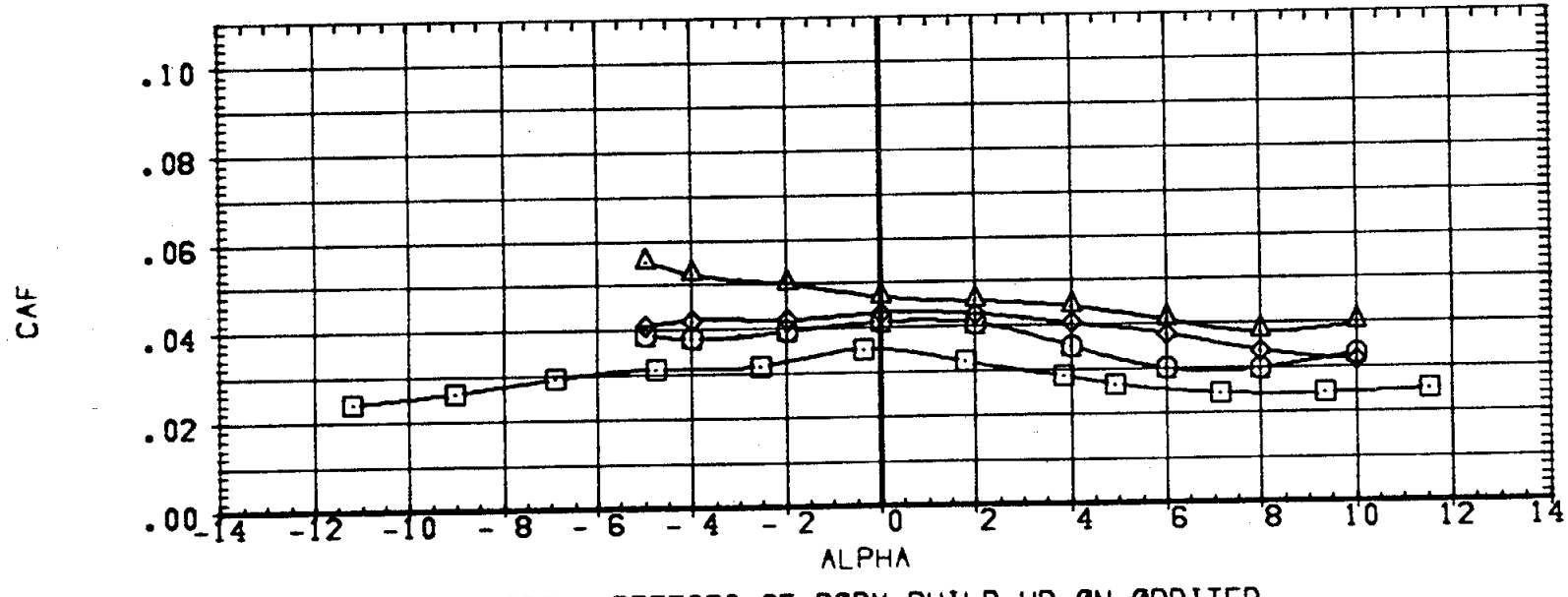
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72023)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72030)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



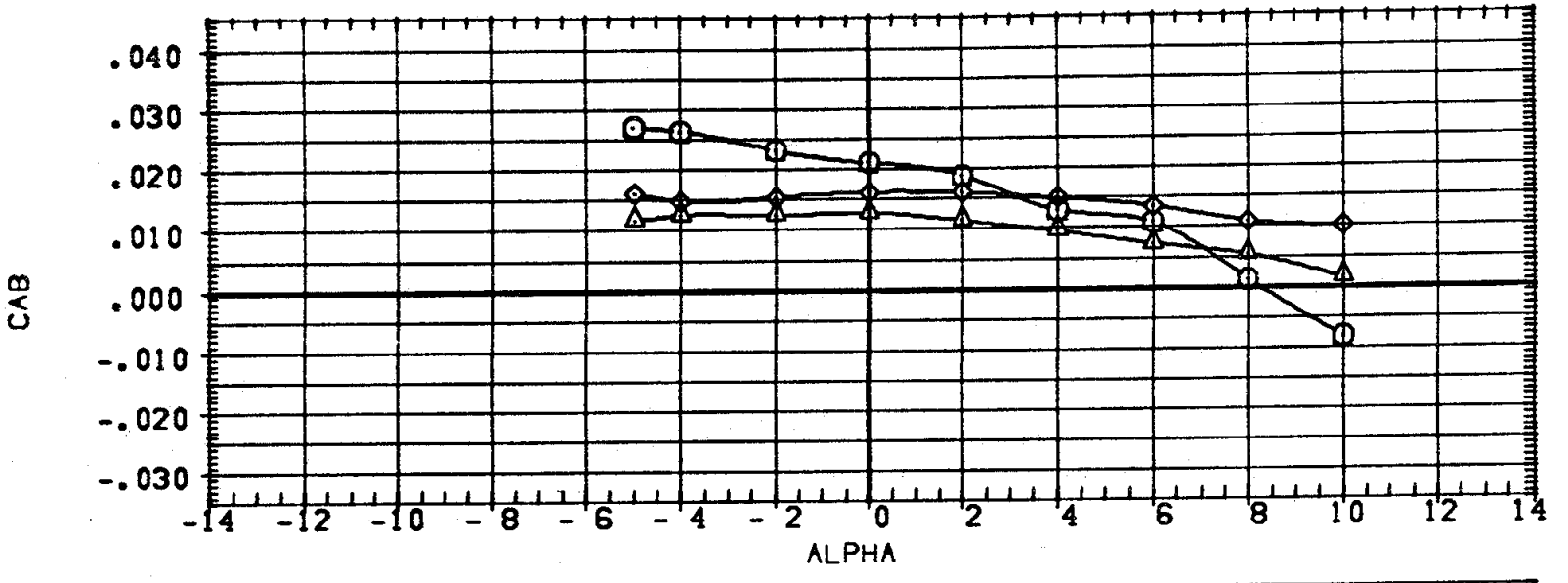


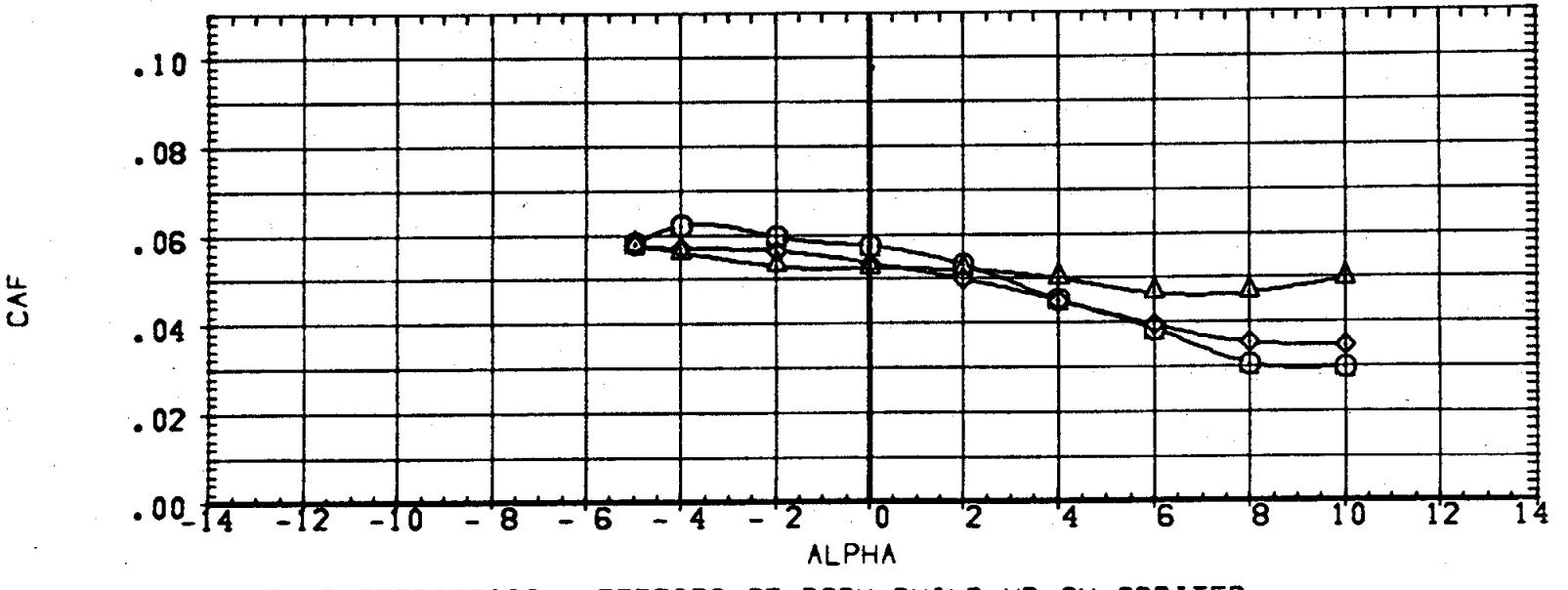
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	-1.200	.120	10.000	-.624
(A72030)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	-1.200	.120	10.000	-.624
(A72501)	□	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





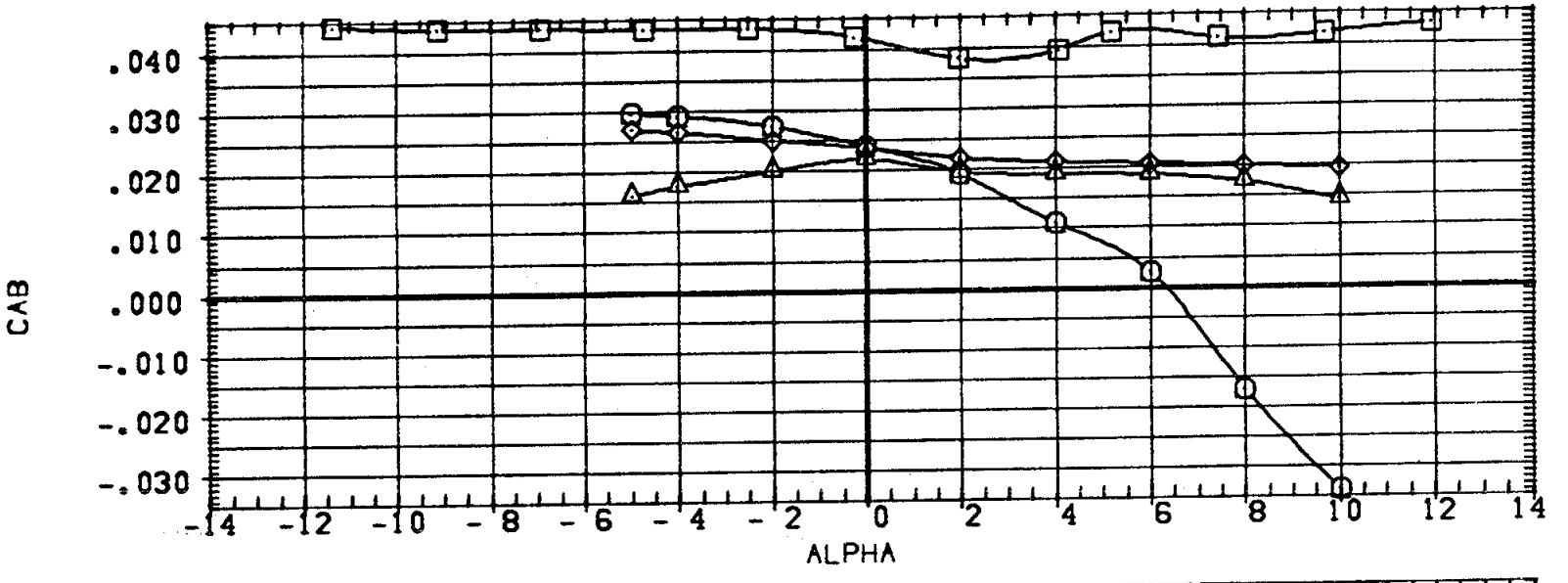
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

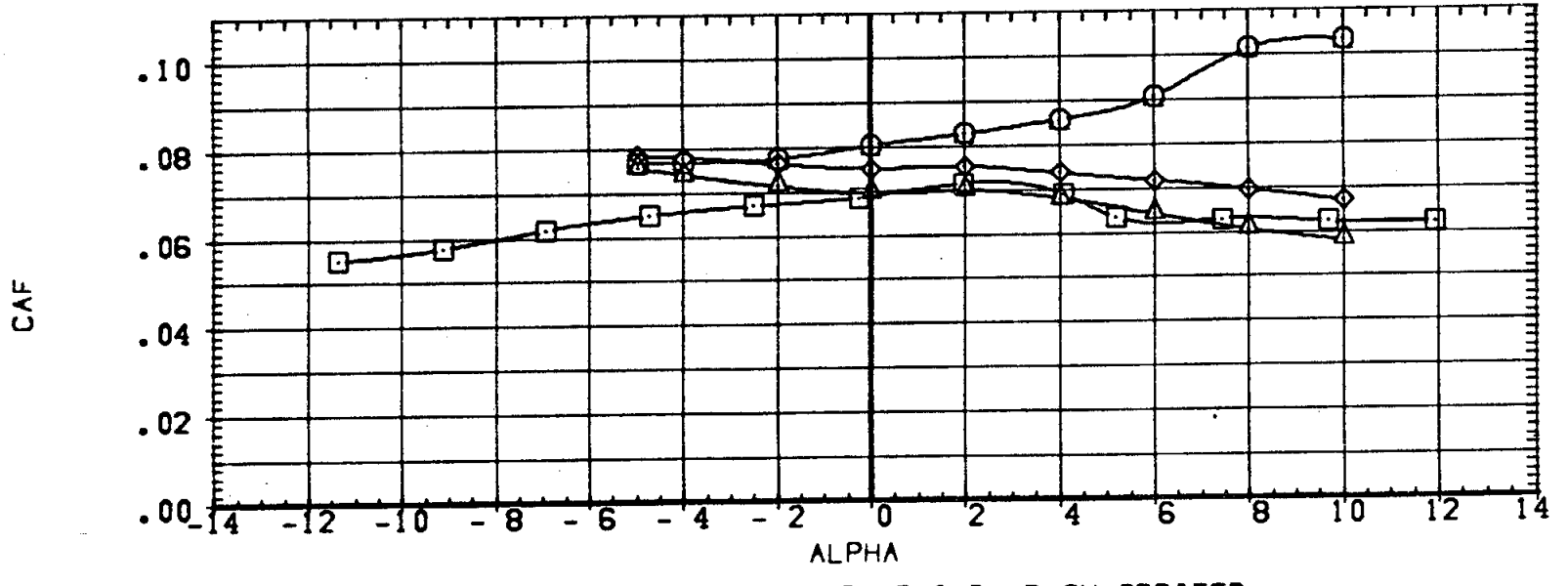
(C)MACH = .99

DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72002)	○	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)
(A72025)	△	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1)
(A72030)	◇	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





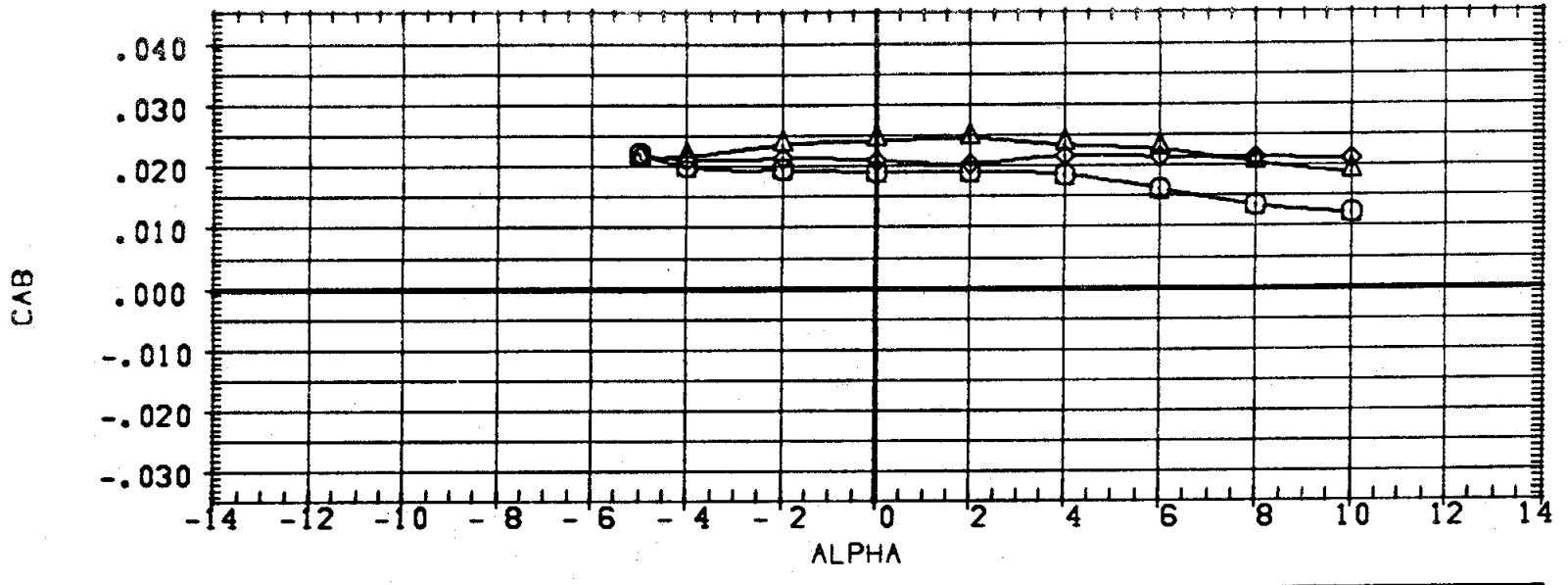
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

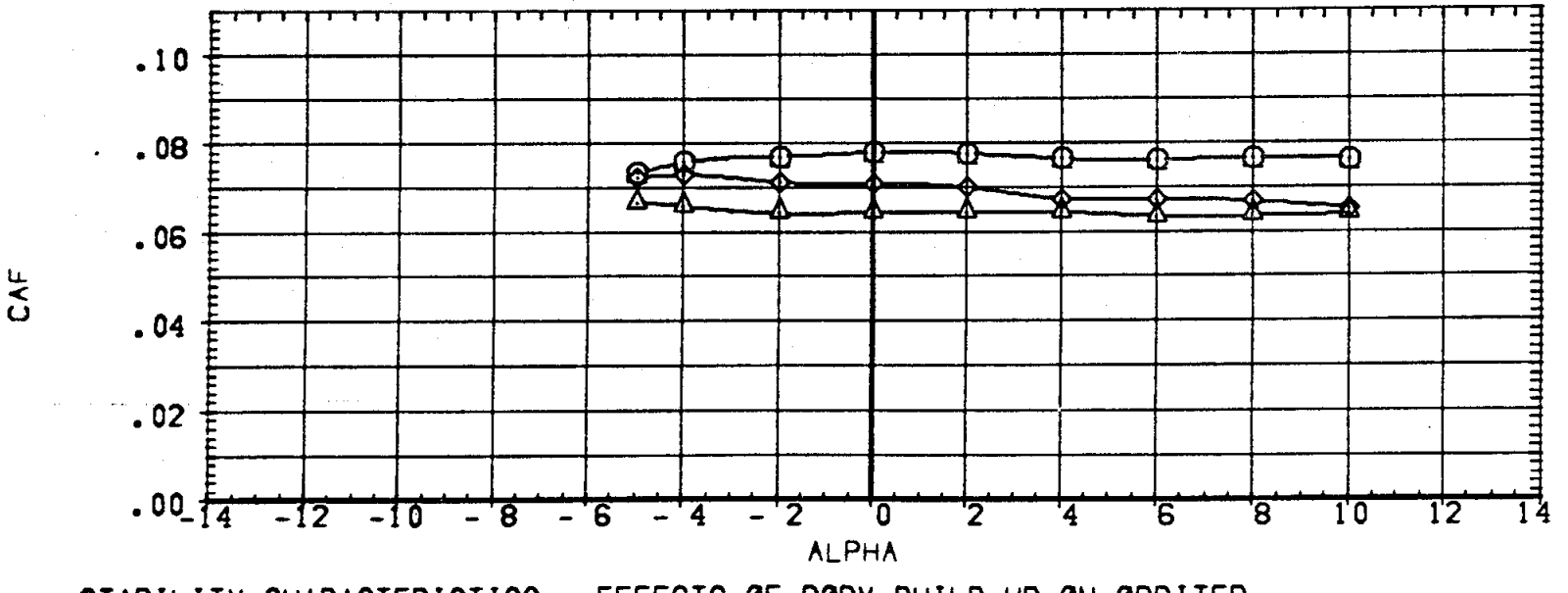
(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	-1.200	.120	10.000	
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(B1)	-1.200	.120	10.000	-.624
(A72030)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(B1)	-1.200	.120	10.000	-.624
(A72501)	□	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMAT

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

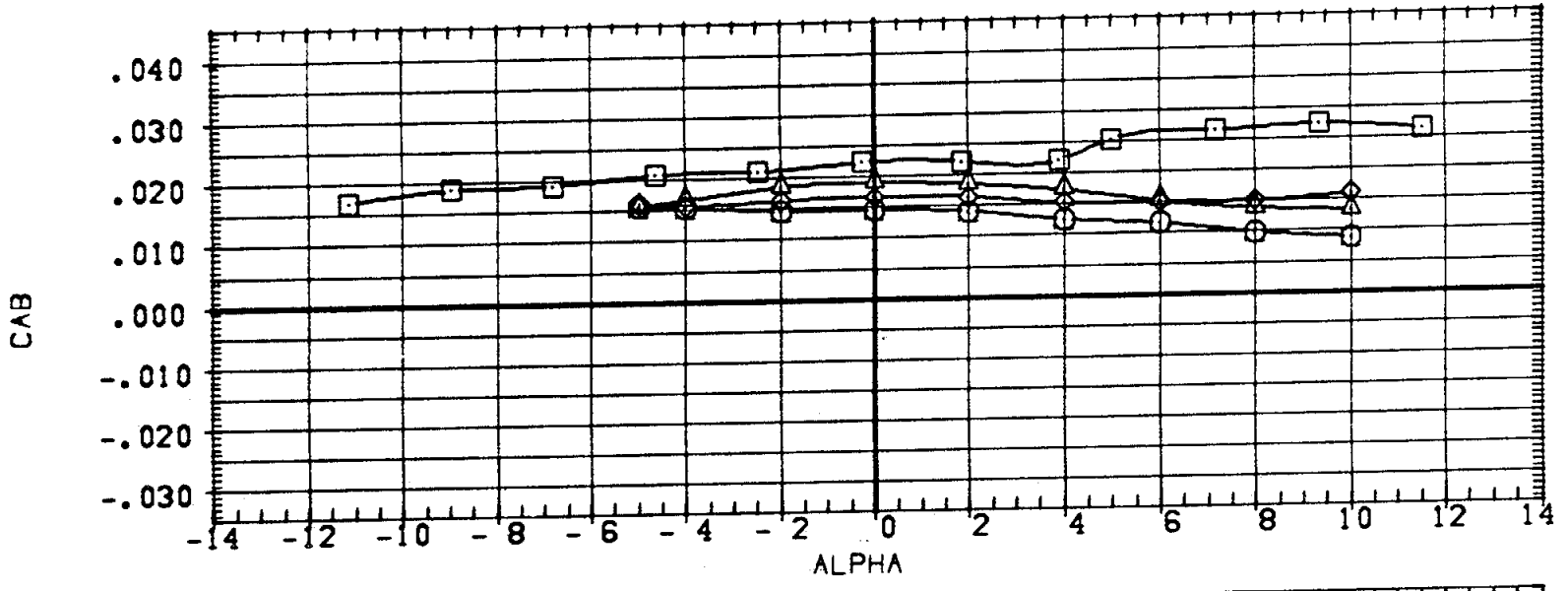
(E)MACH = 1.46

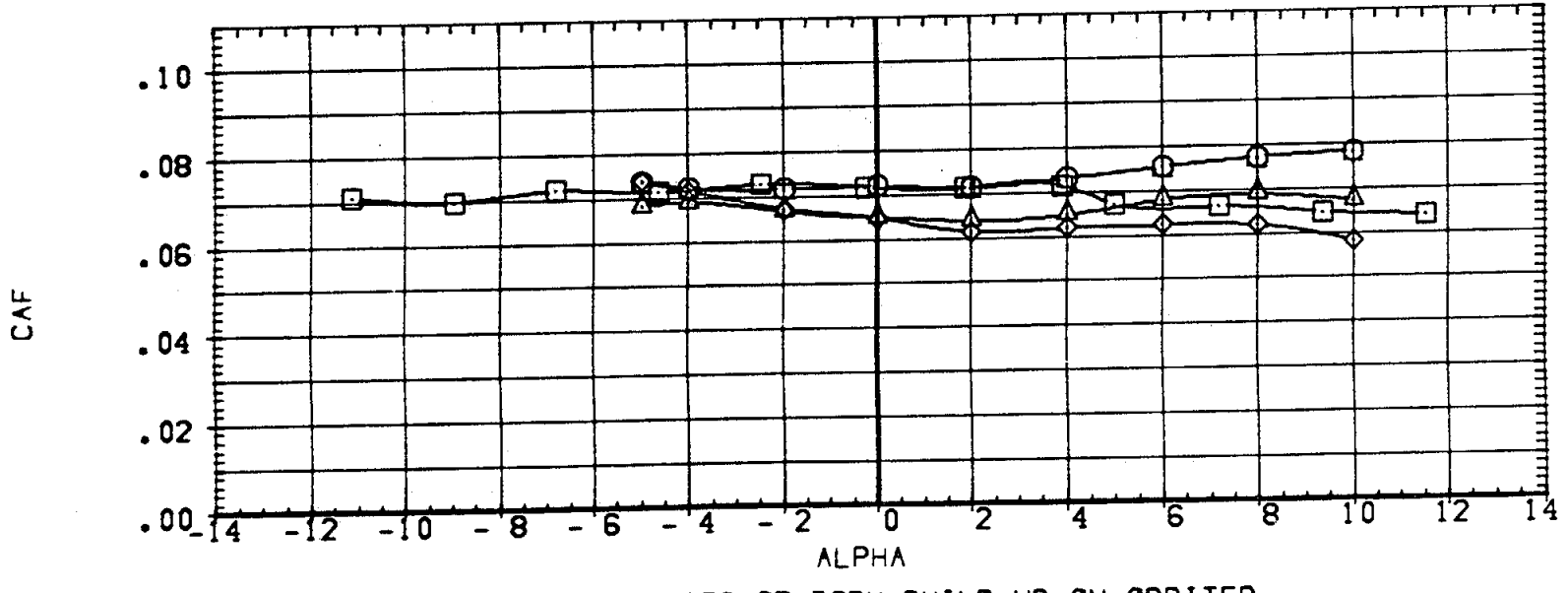
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)
(A72030)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



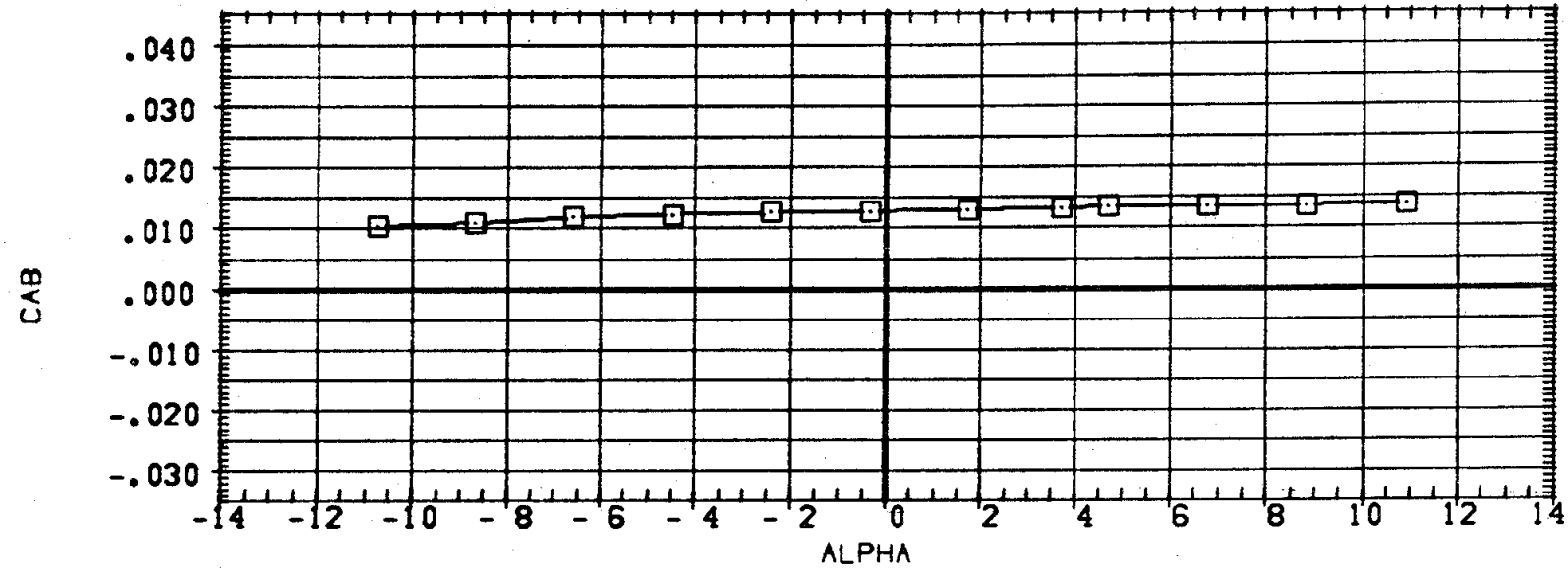


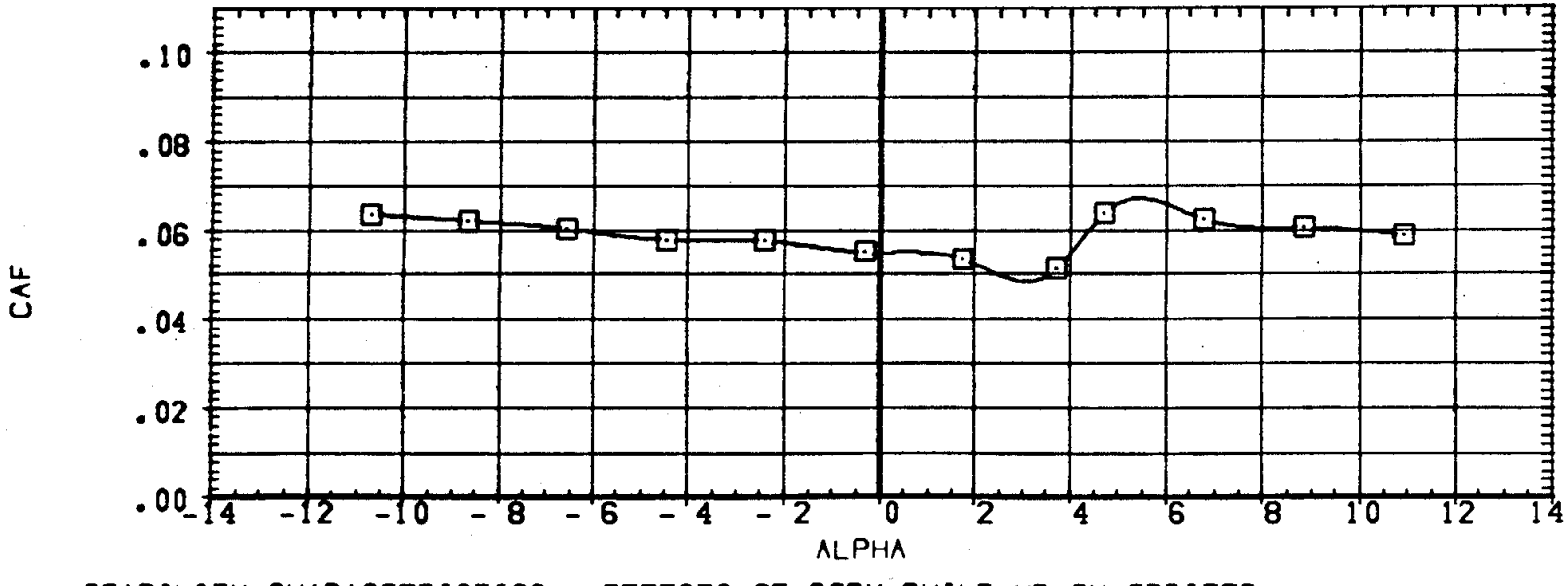
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(F)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72002)	○	DATA NOT AVAILABLE	-1.200	.120	10.000	
(A72023)	△	DATA NOT AVAILABLE	-1.200	.120	10.000	-.624
(A72030)	◇	DATA NOT AVAILABLE	-1.200	.120	10.000	-.624
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





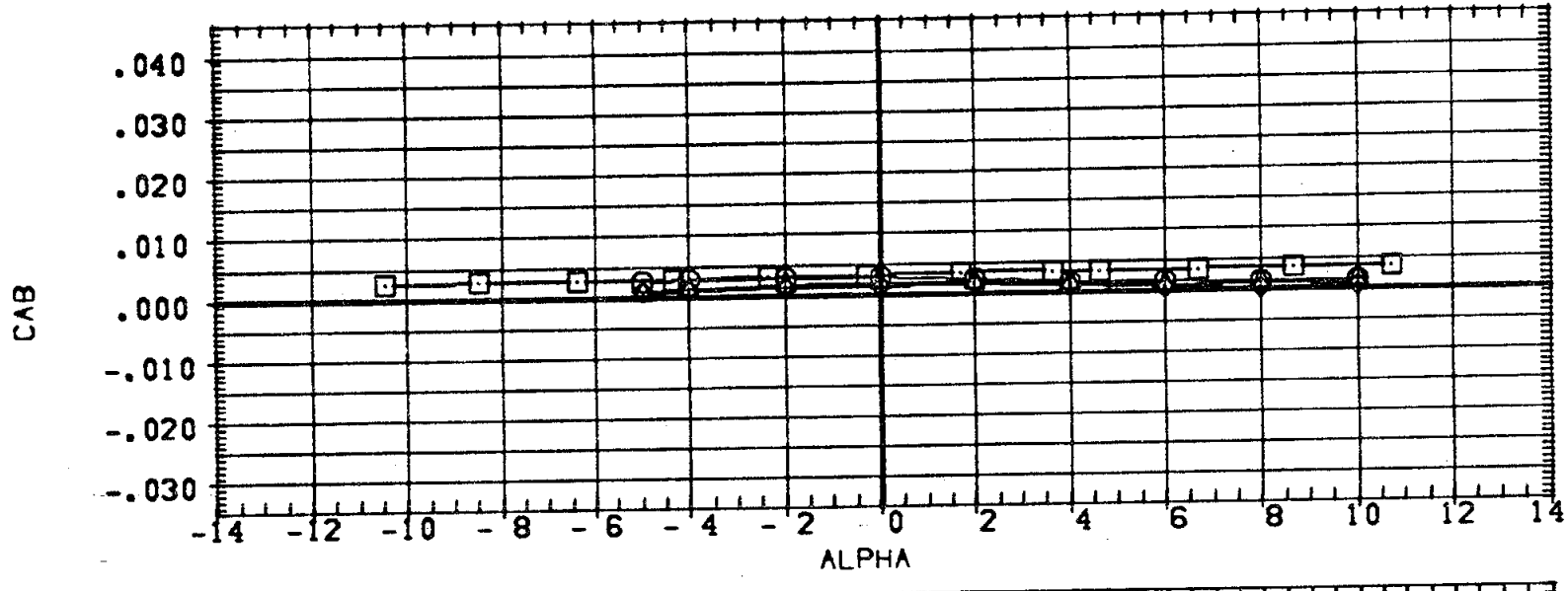
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

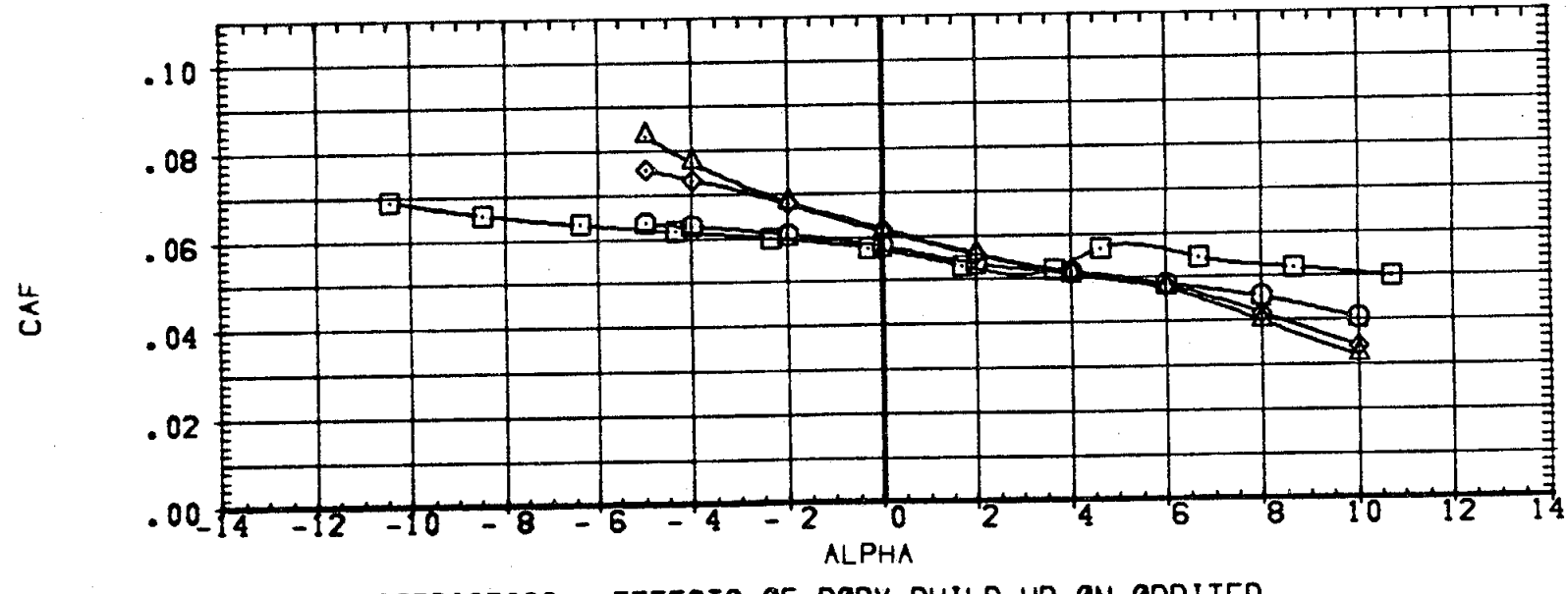
(G)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72002)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72023)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72030)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





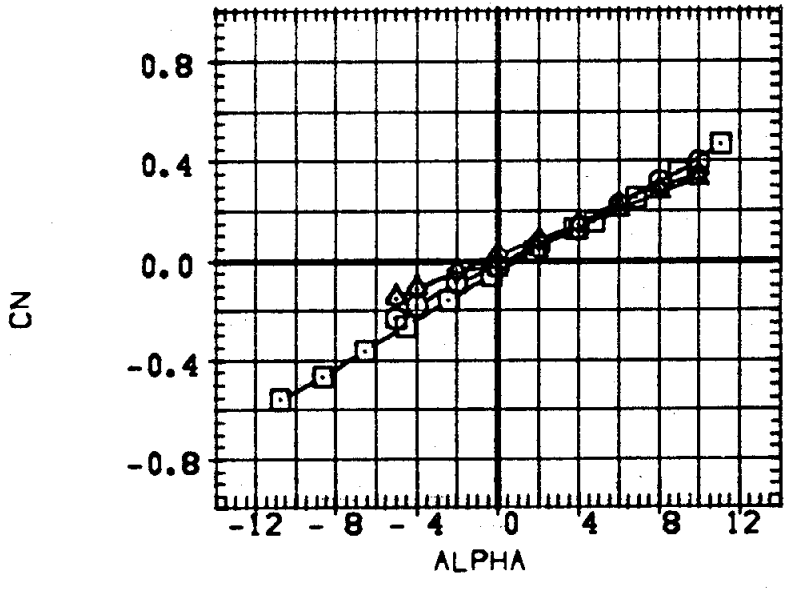
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

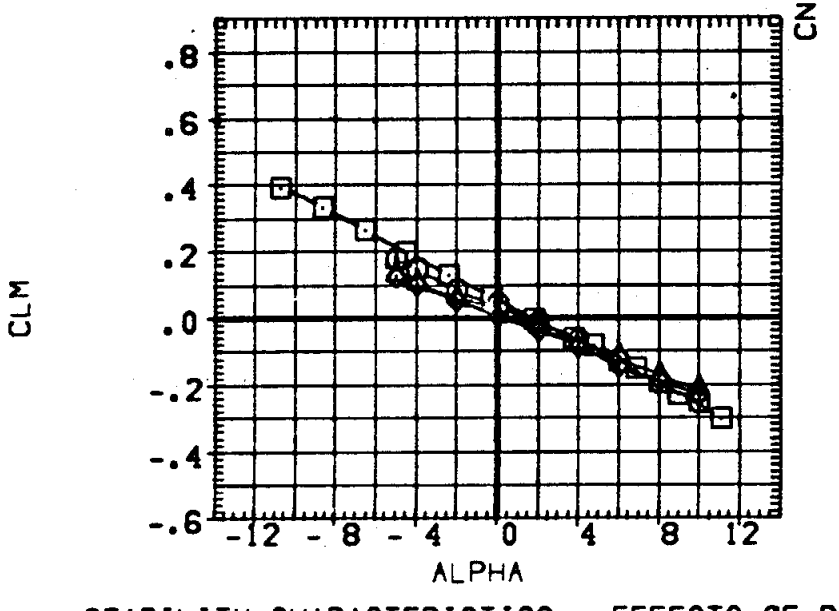
(H)MACH = 4.96

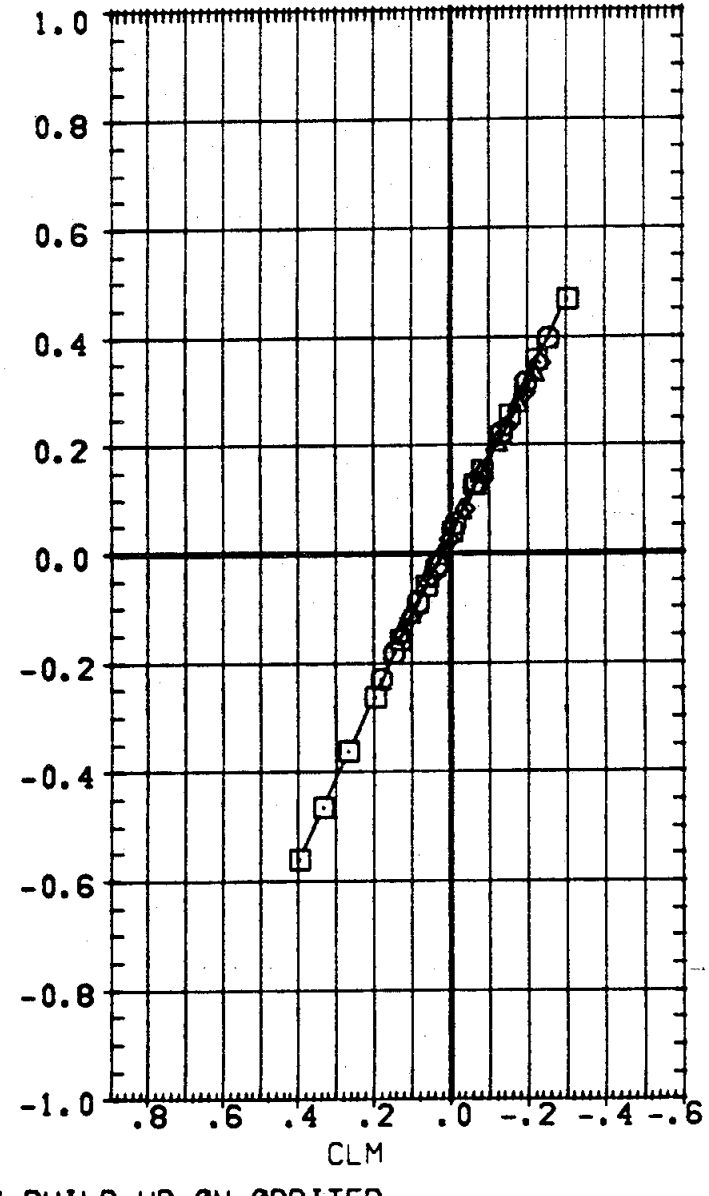
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC S4S (1A1) MOD ATP LV-(O1)/(T3)
(A72024)	△	MSFC S4S (1A1) MOD ATP LV-(O1)/(T3)(S1)
(A72031)	◇	MSFC S4S (1A1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC S4S (1A1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







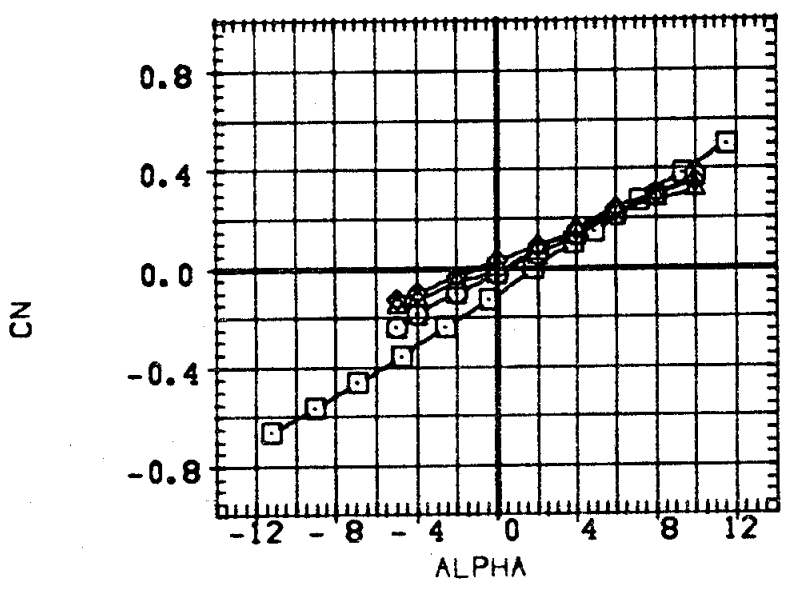
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

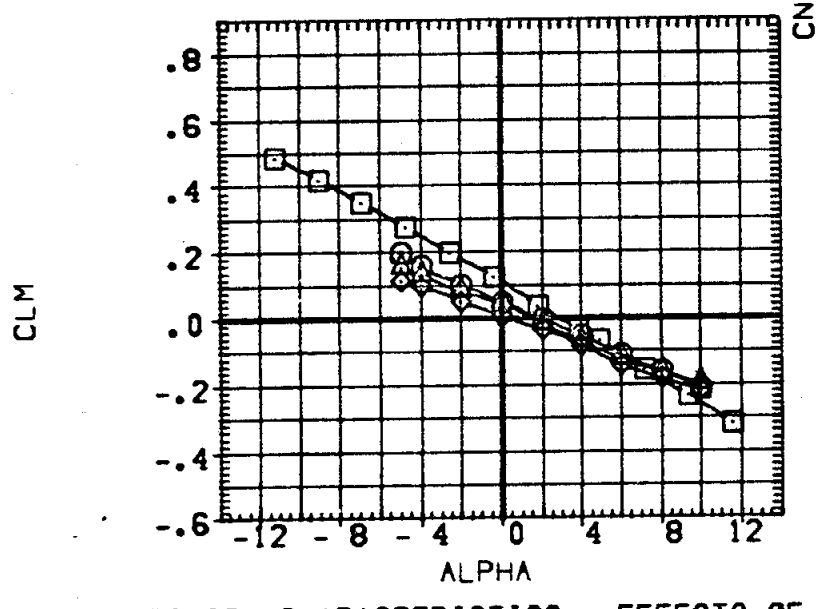
(A)MACH = .60

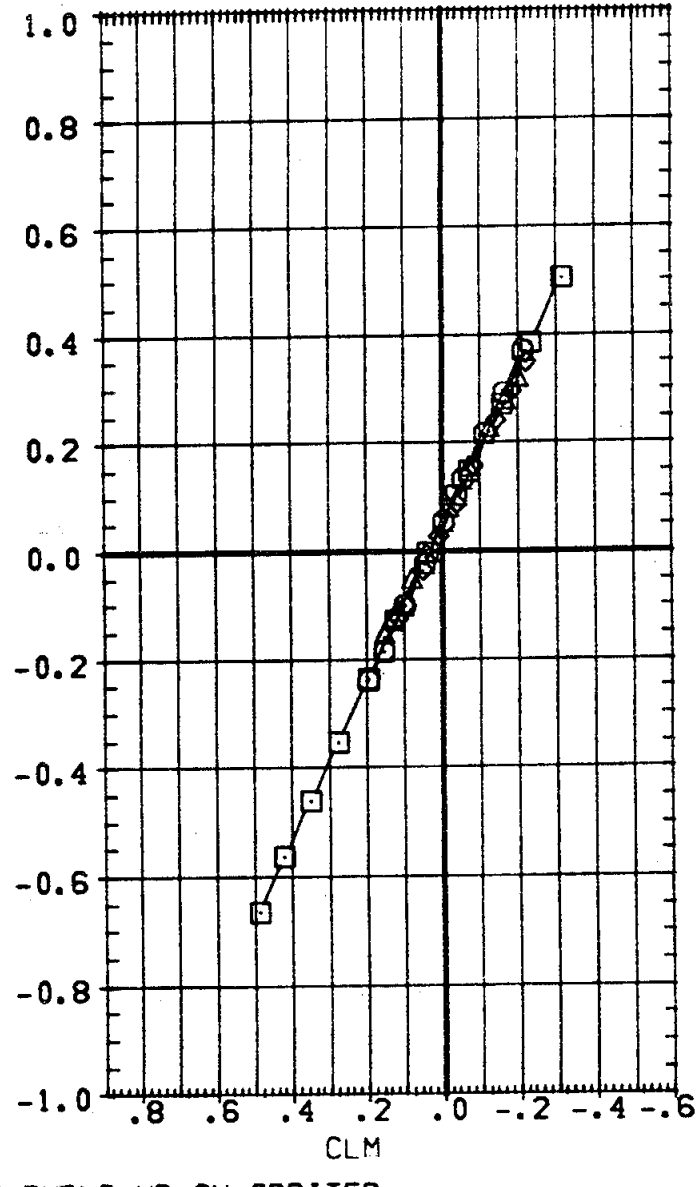
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72024)	▷◁	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







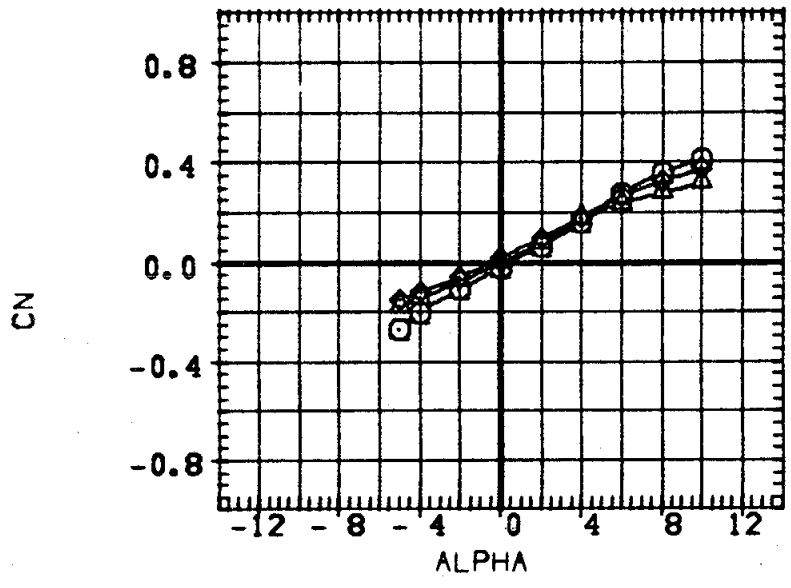
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

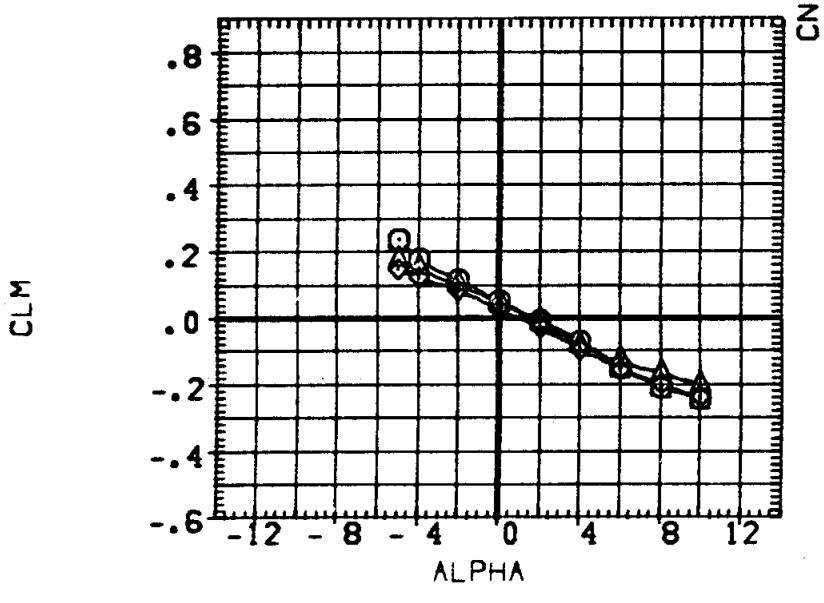
(B)MACH = .90

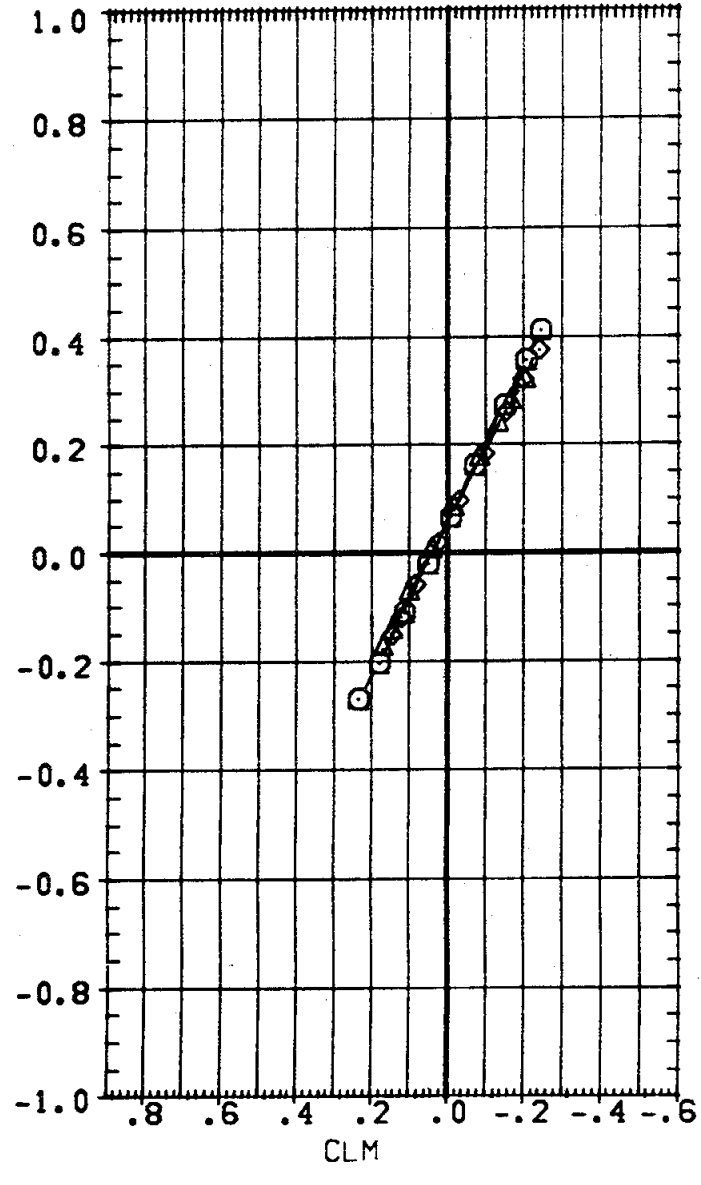
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AP2024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(AP2031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(AP2501)	□	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







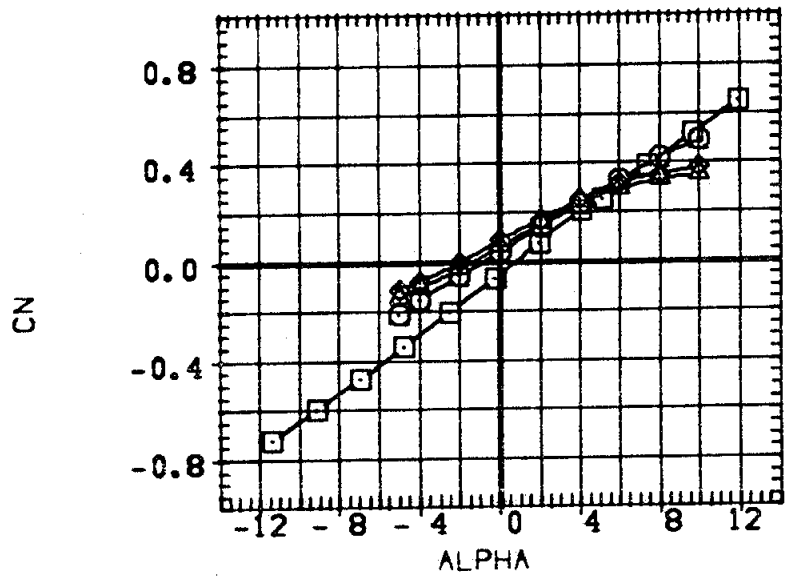
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

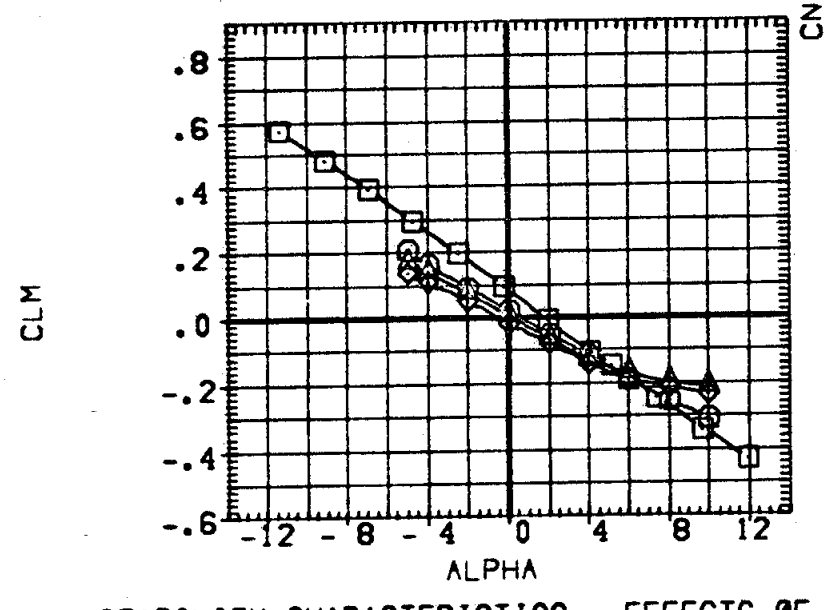
(C)MACH = .99

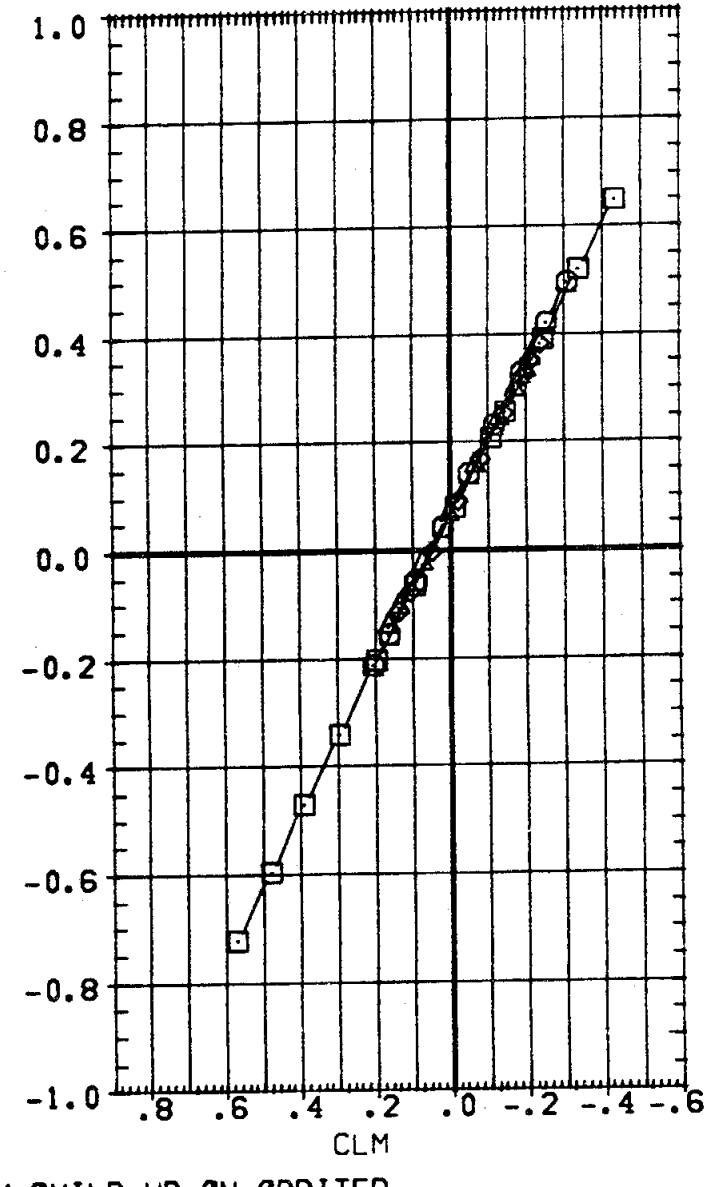
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







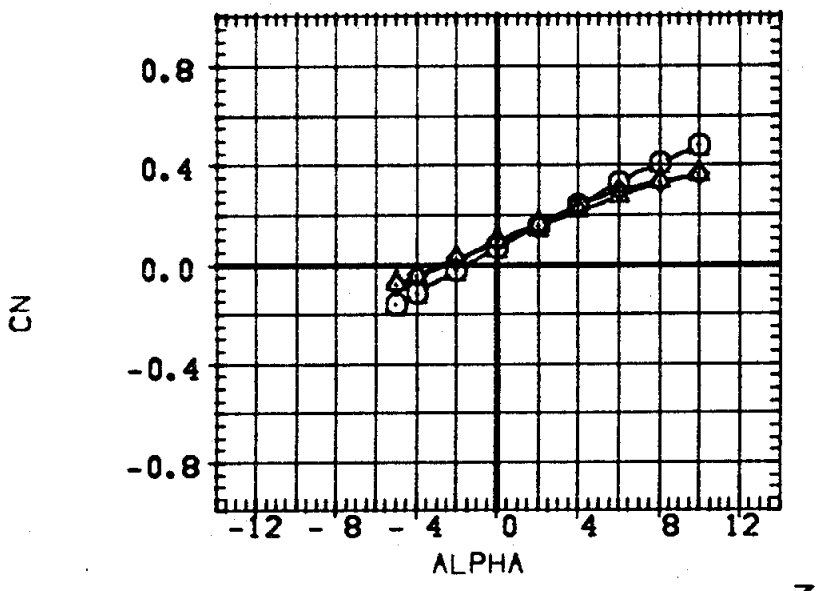
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

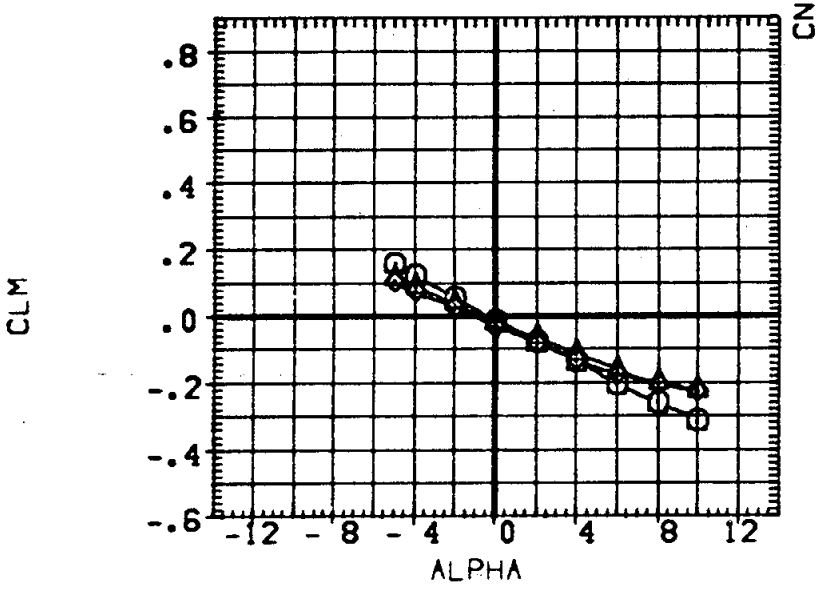
(D)MACH = 1.19

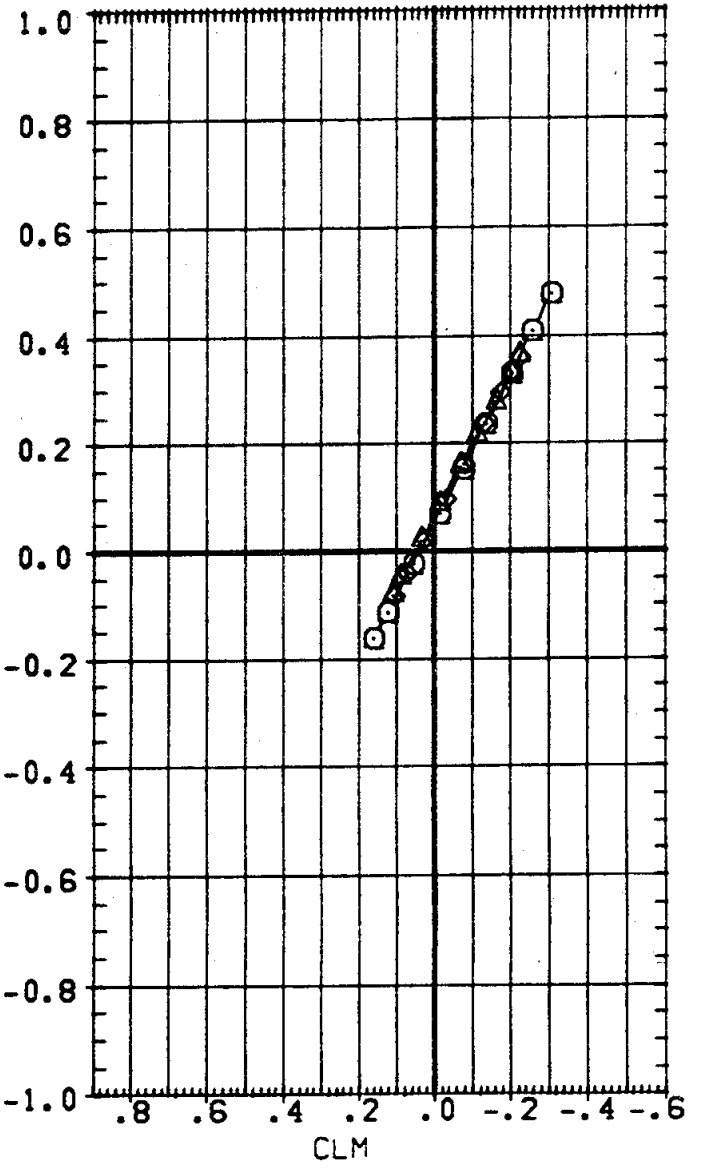
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)
(A72024)	☒	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)
(A72031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)
(A72501)	□	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







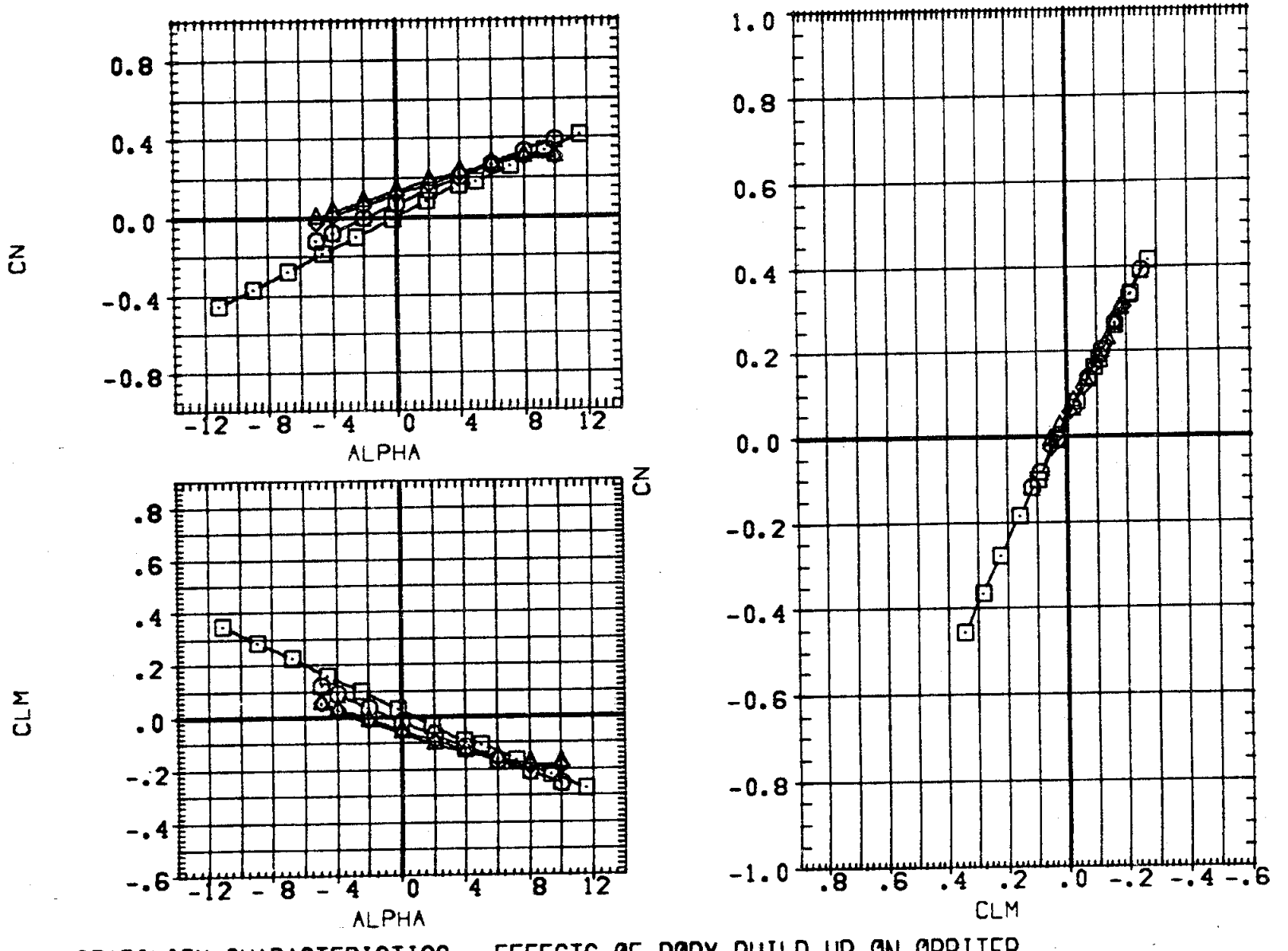
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)
(A72031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



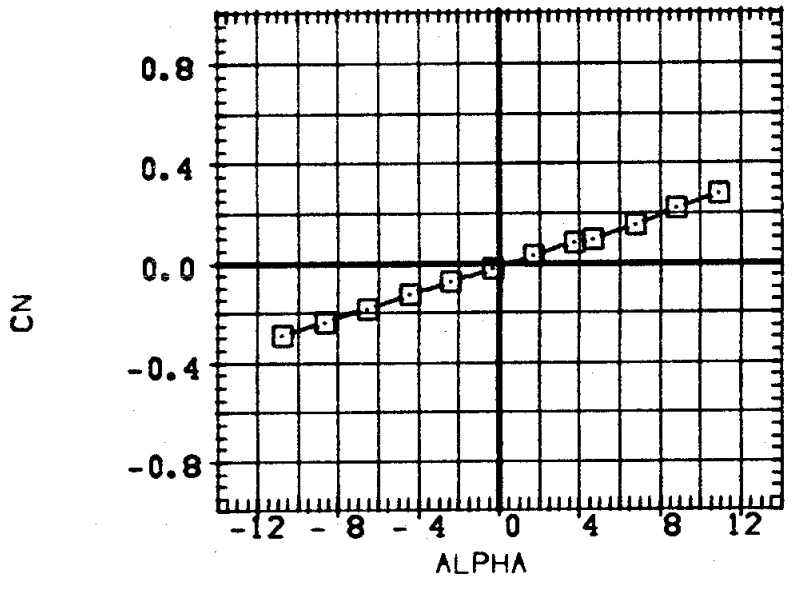
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

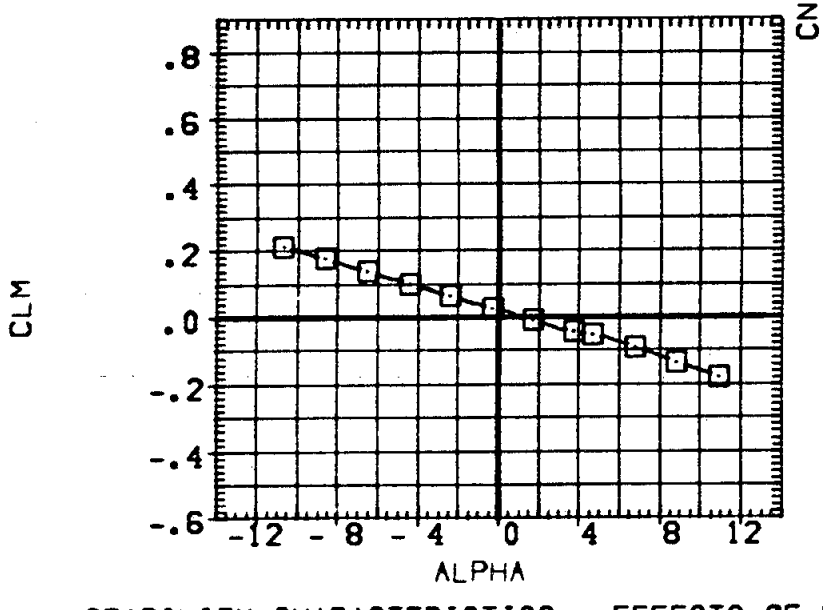
(F)MACH = 1.96

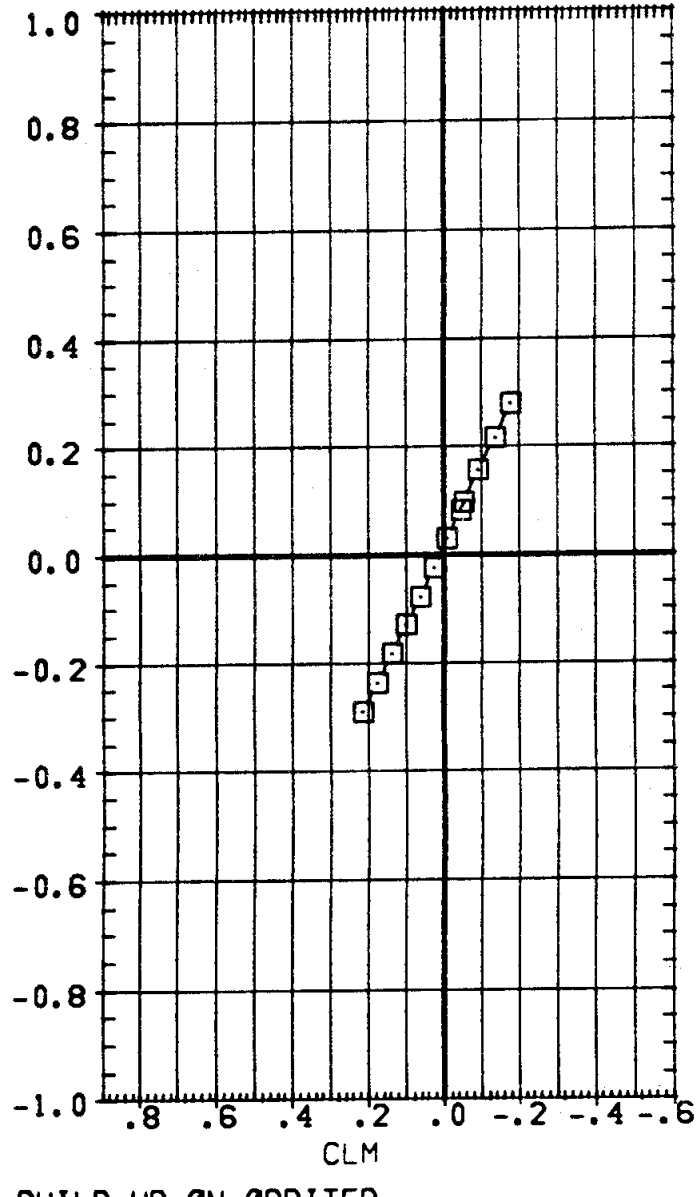
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	DATA NOT AVAILABLE
(A72024)	⊠	DATA NOT AVAILABLE
(A72031)	◇	DATA NOT AVAILABLE
(A72501)	□	MSFC 545 (1A1) NAR ATP BL ORBITER-(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







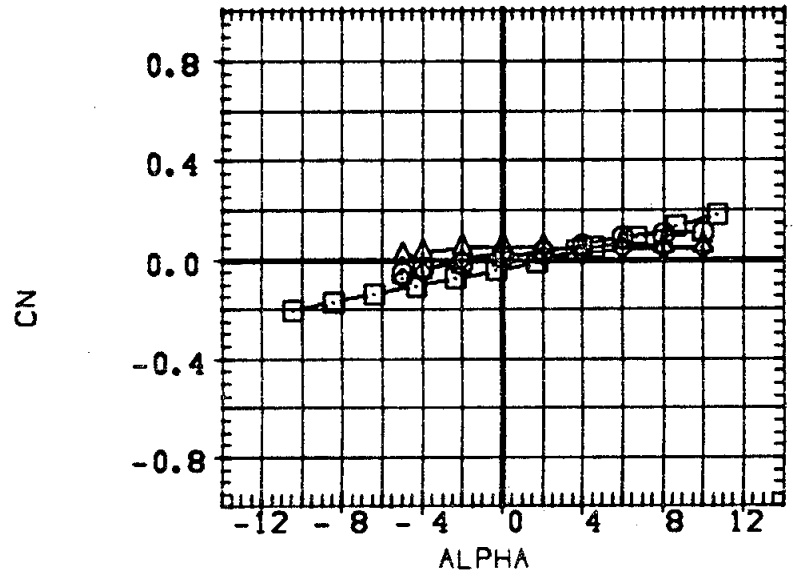
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

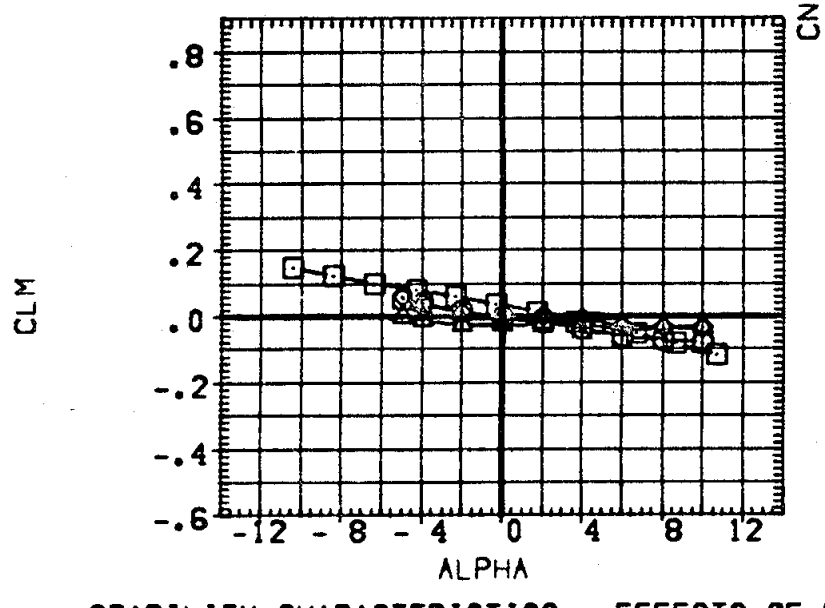
(G)MACH = 2.99

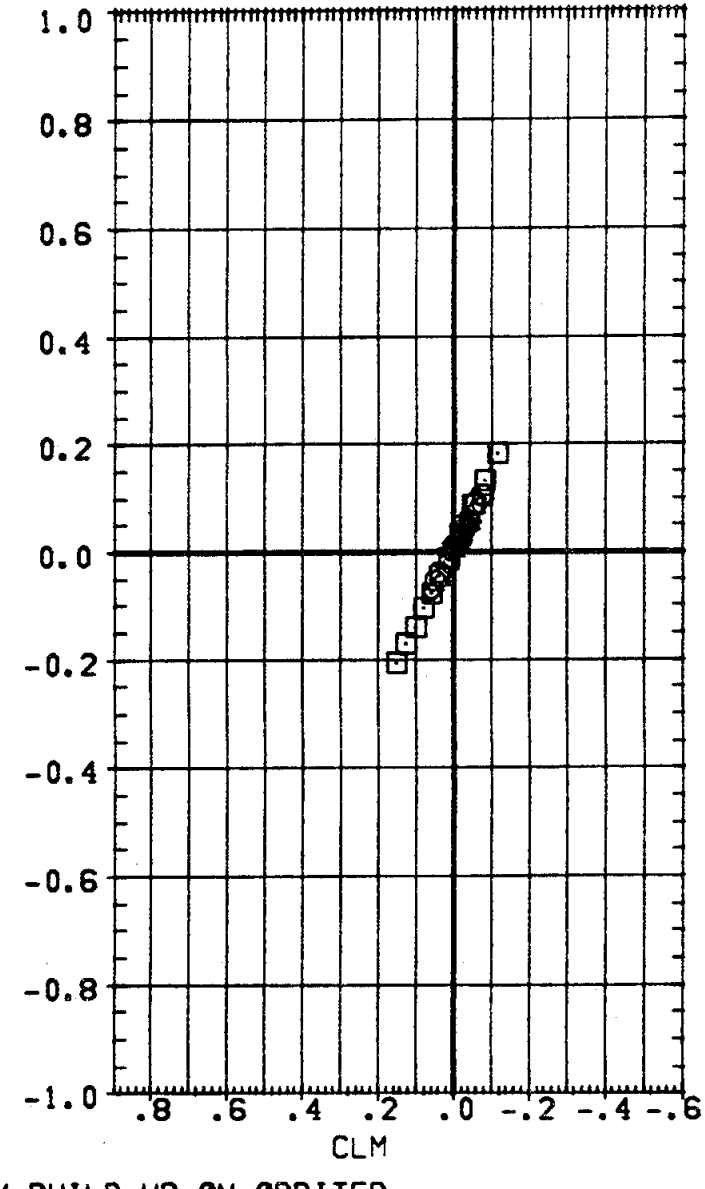
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72008)	○	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)
(A72024)	△	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72031)	◇	MSFC S4S (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC S4S (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





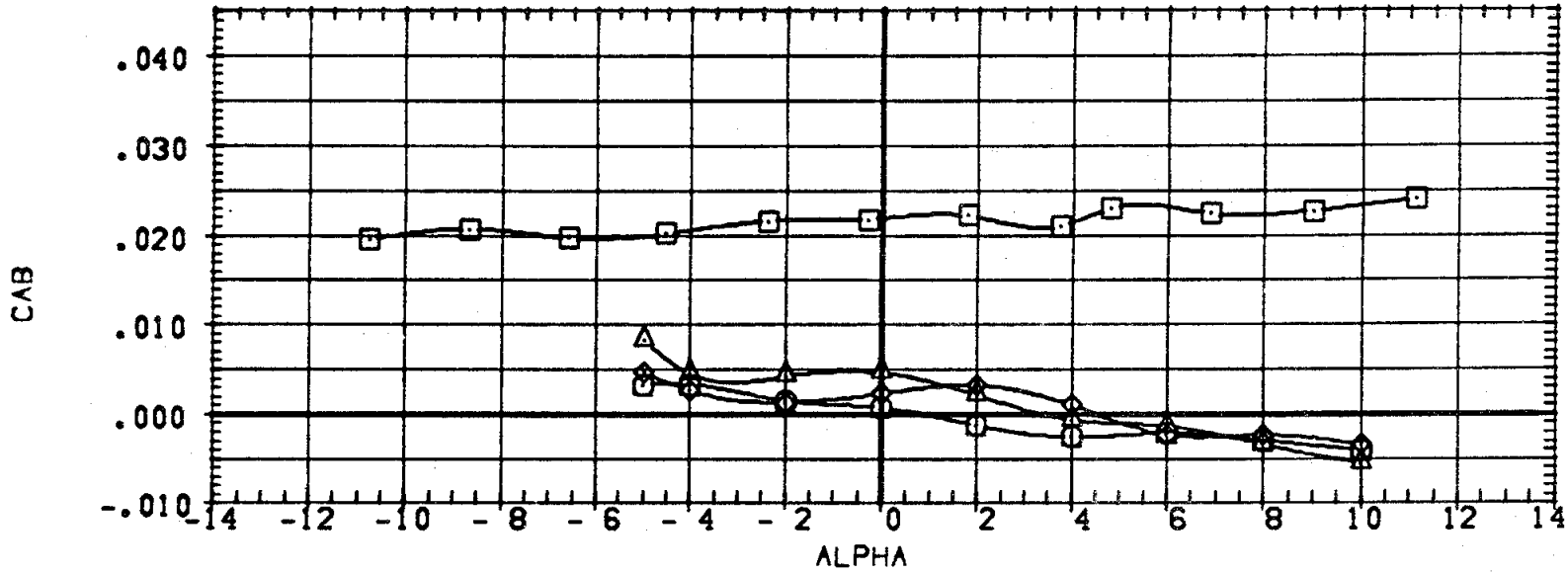


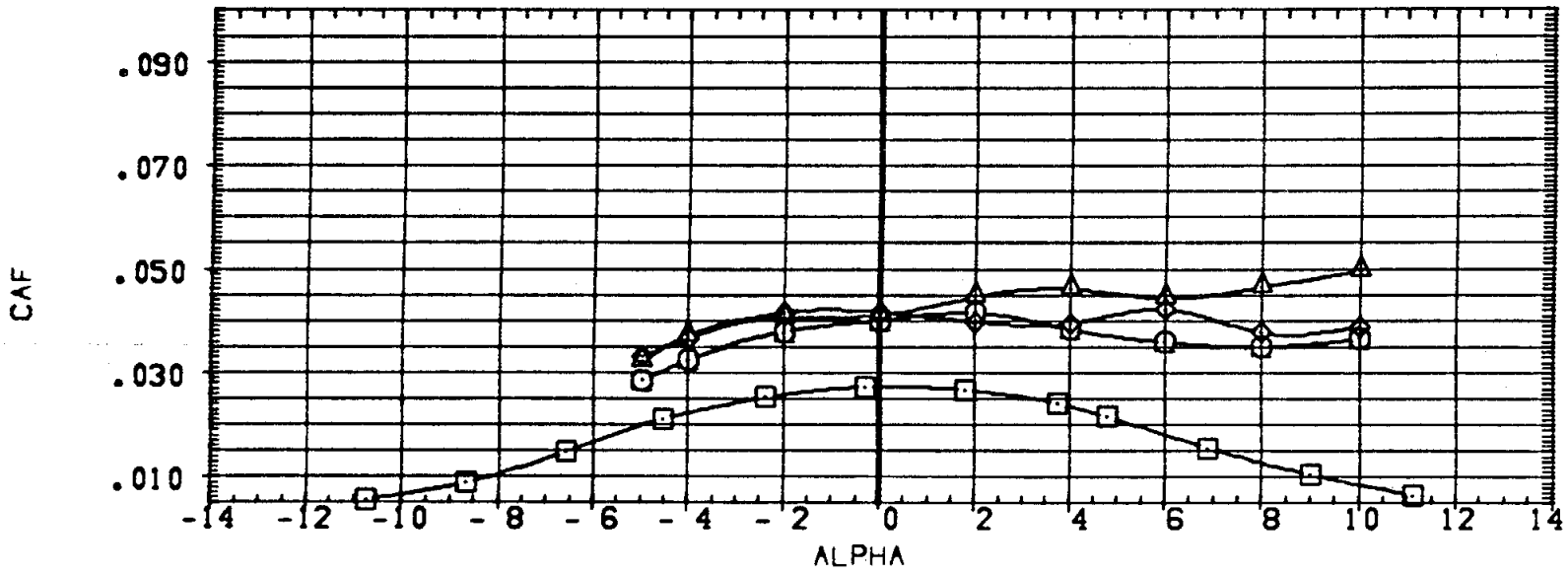
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(H)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2003)	○	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(AY2024)	△	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(AY2051)	◇	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	-.624
(AY2501)	□	HSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3280.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

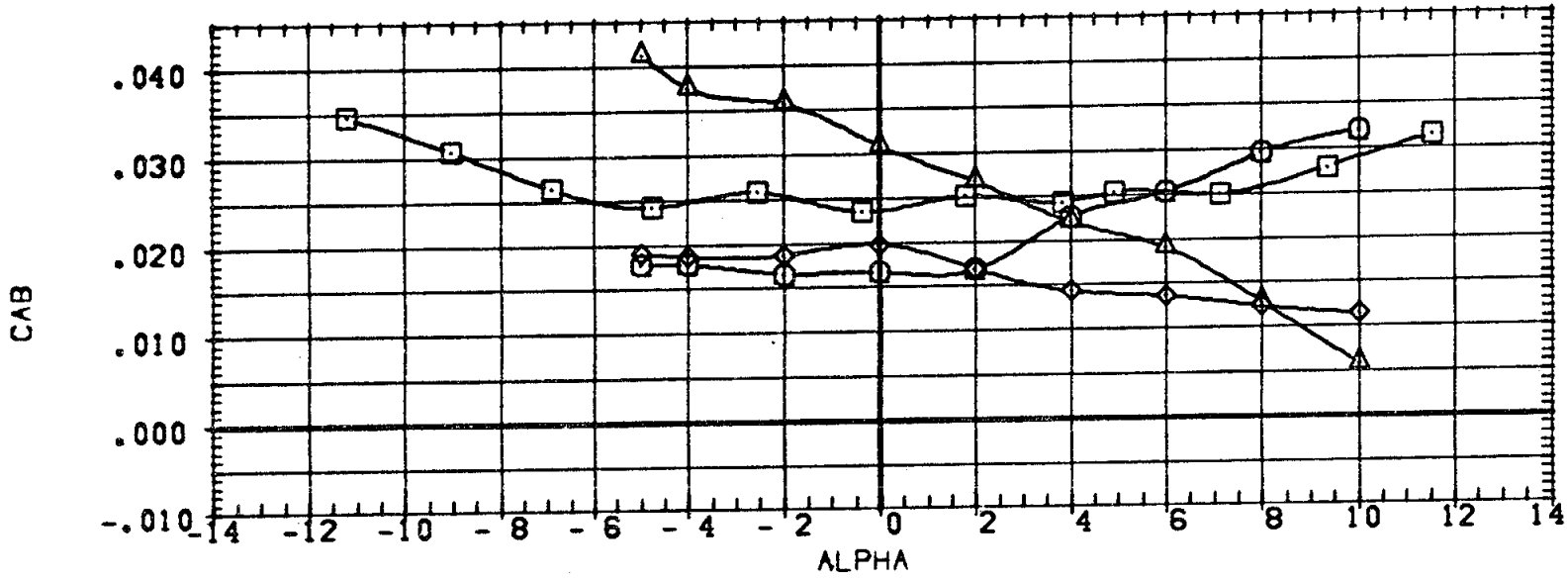
(A)MACH = .60

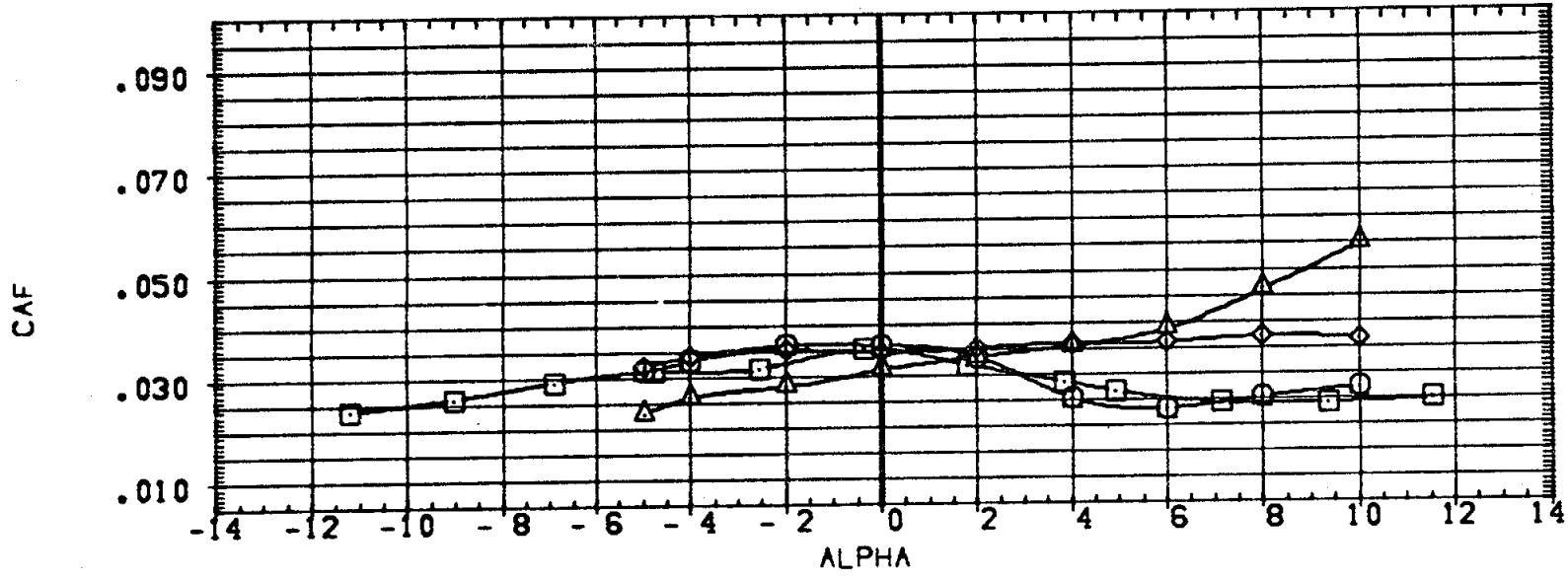
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)
(A72031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





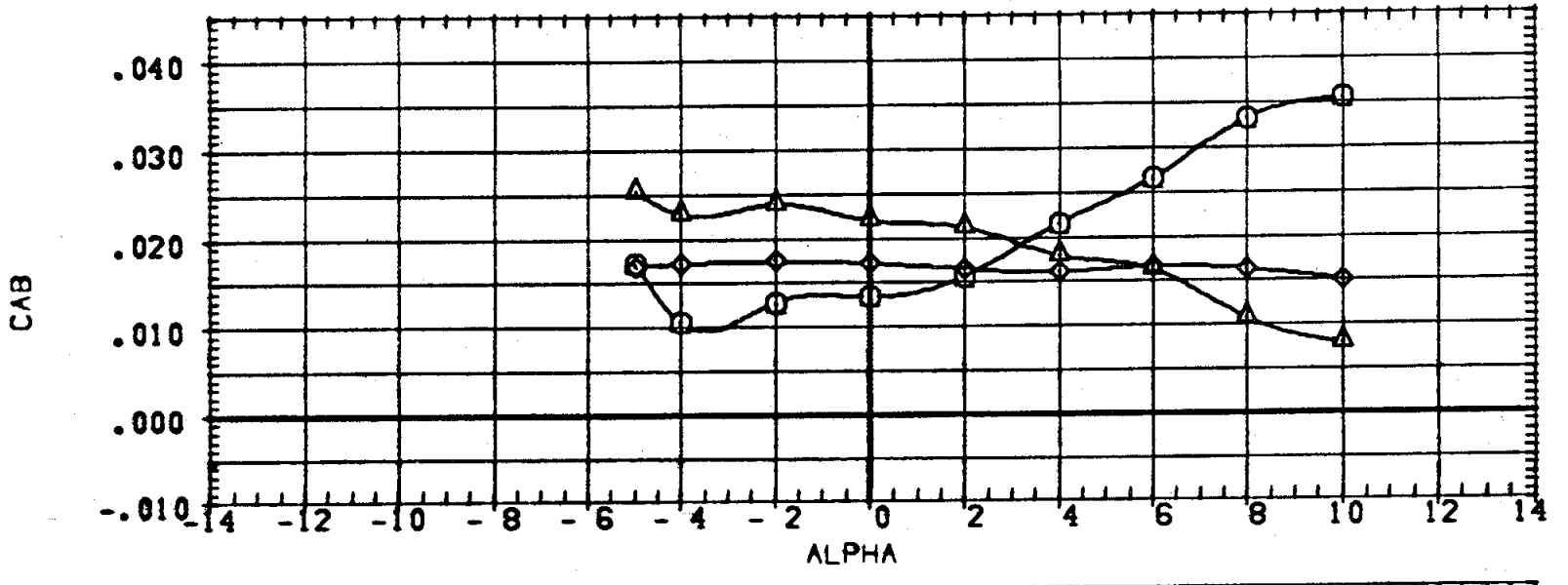
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

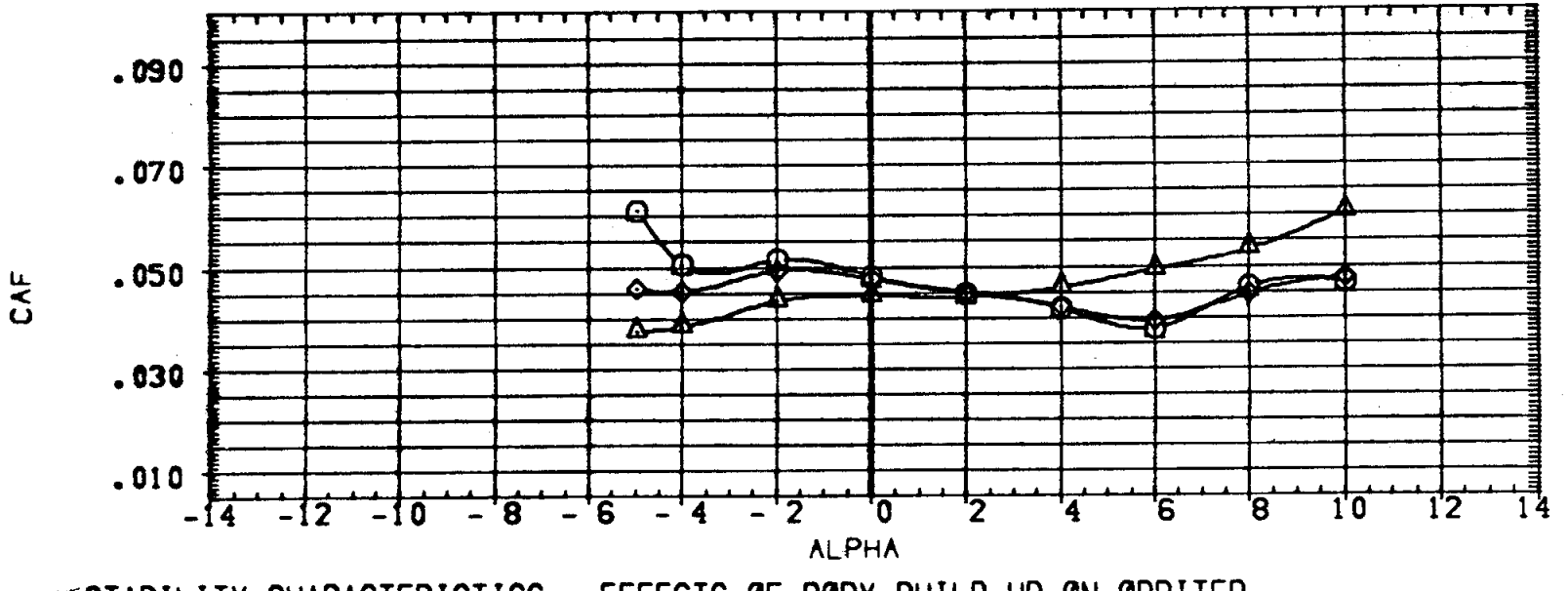
(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AP2003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(AP2024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(AP2031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	-.624
(AP2501)	□	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





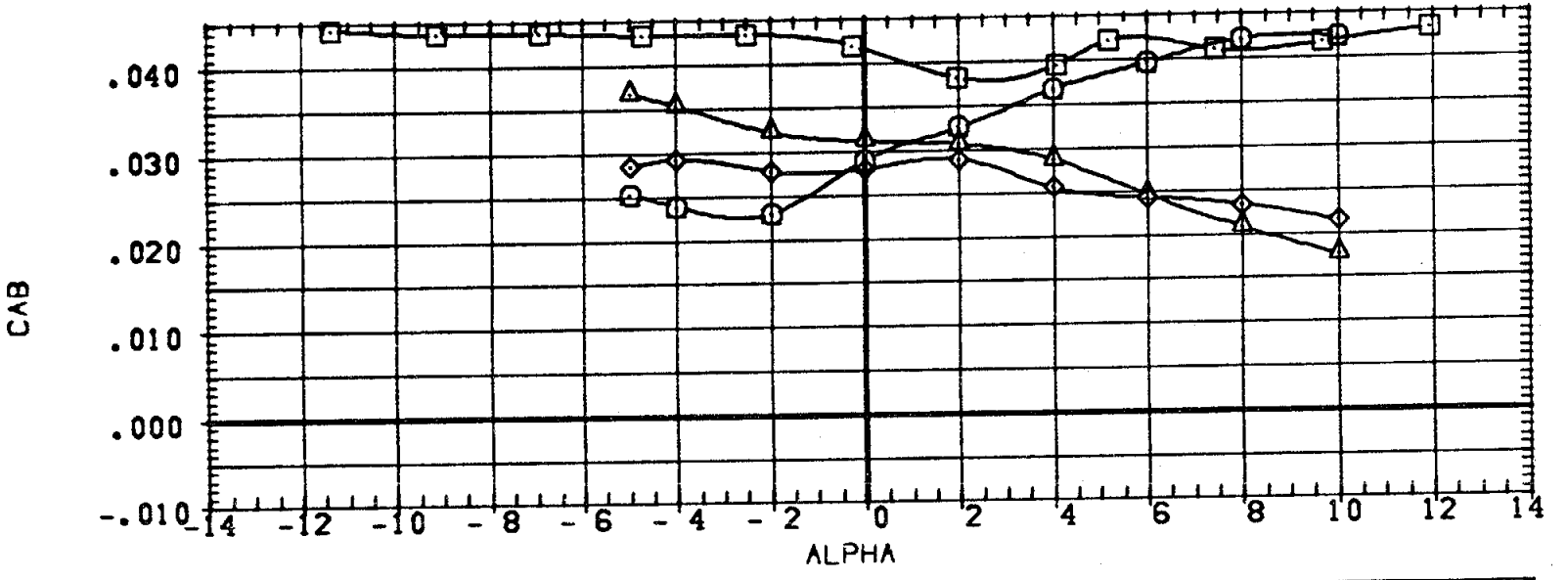
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

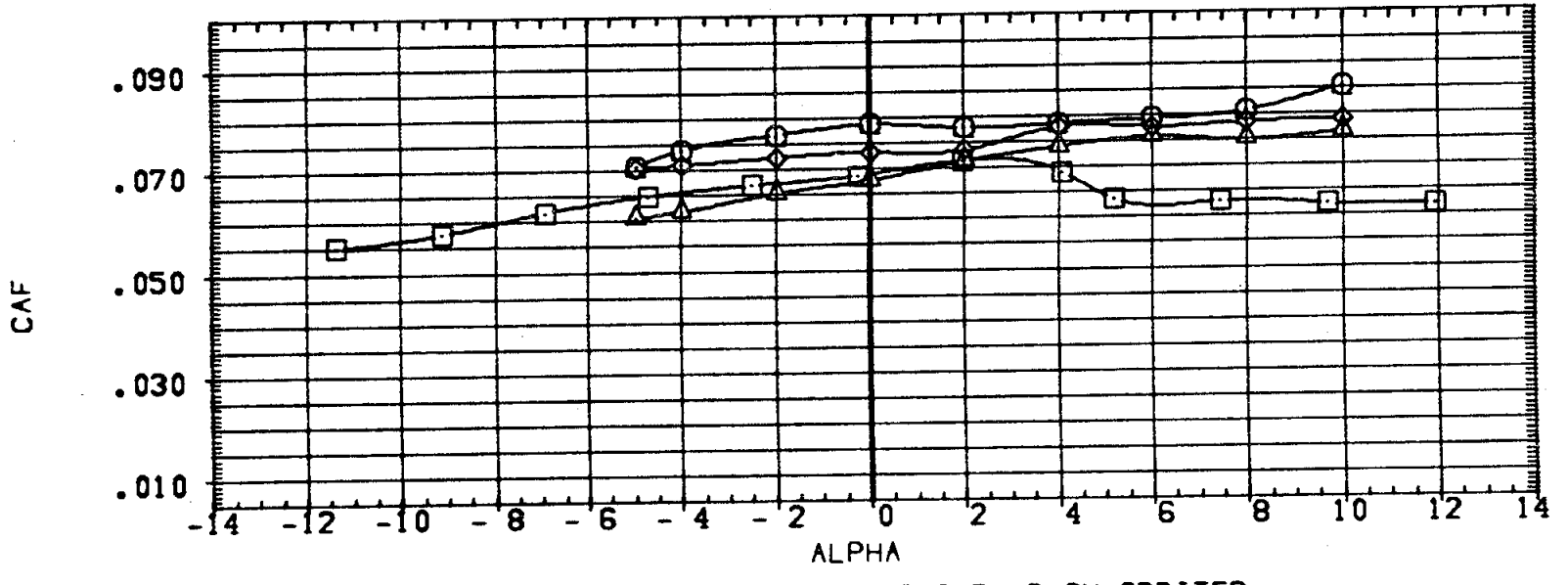
(C)MACH = .99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



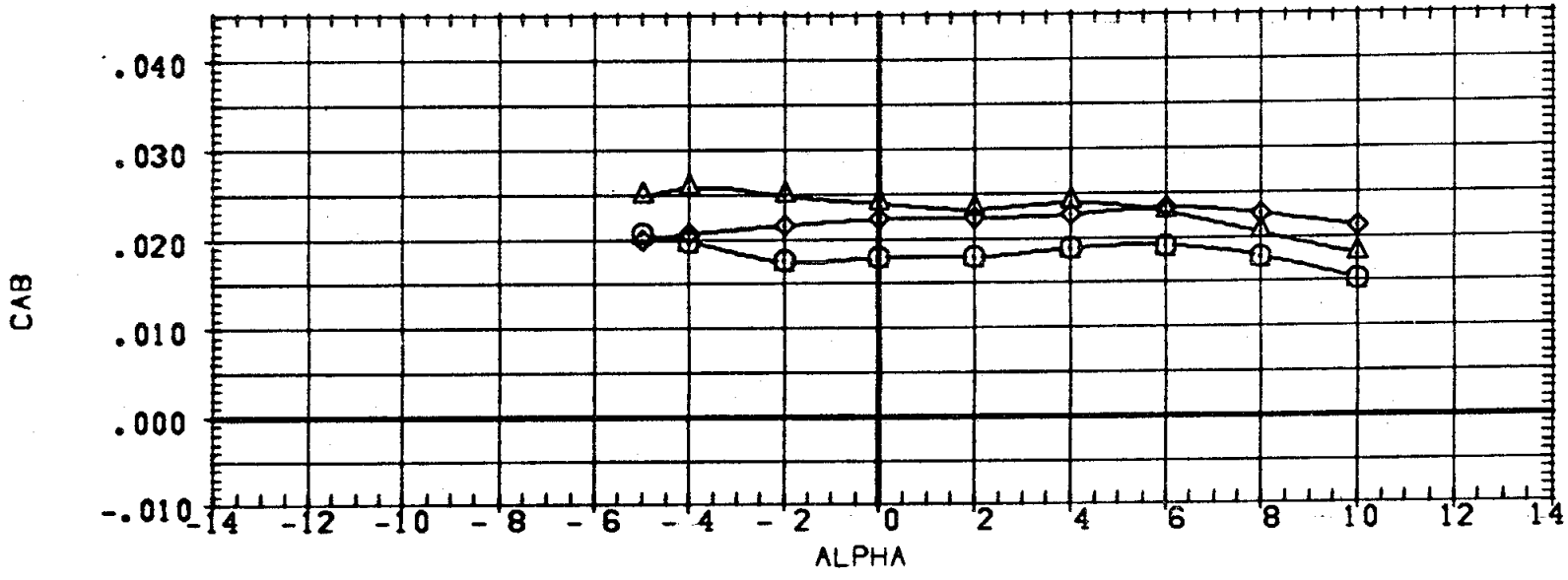


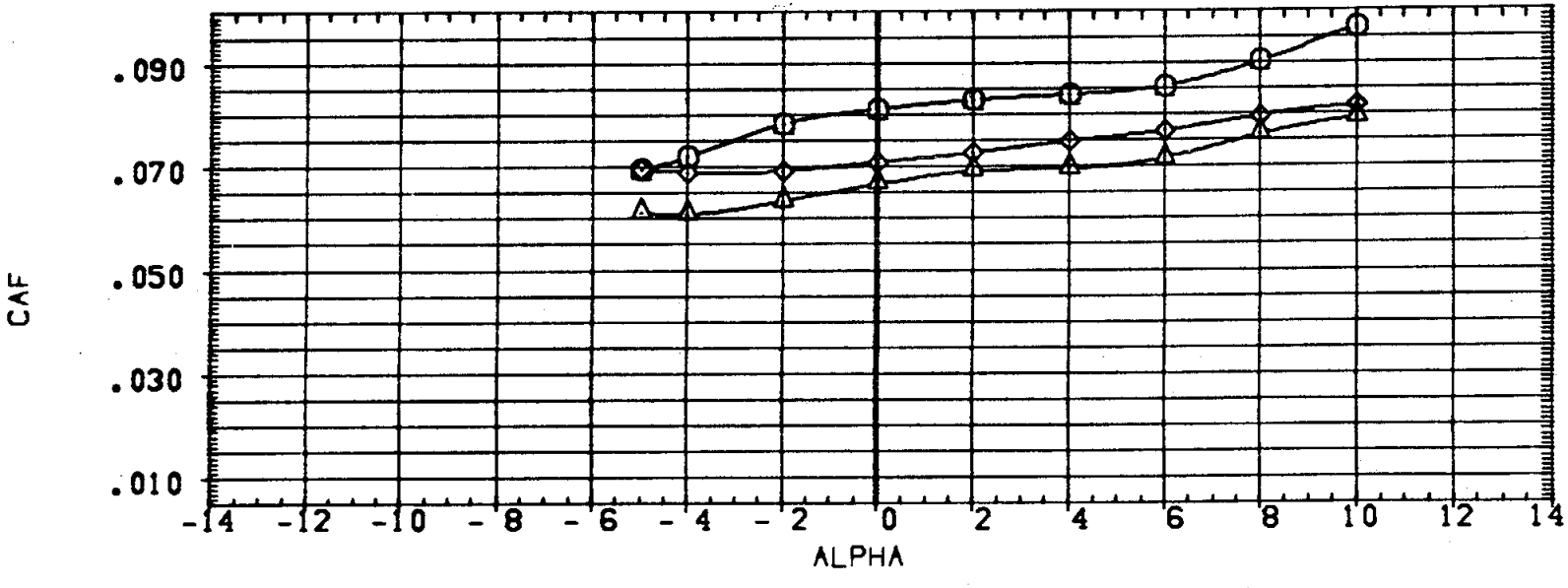
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(D)MACH = 1.19

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	1.500	.120	10.000	
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	1.500	.120	10.000	-.624
(A72031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	1.500	.120	10.000	-.624
(A72501)	□	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





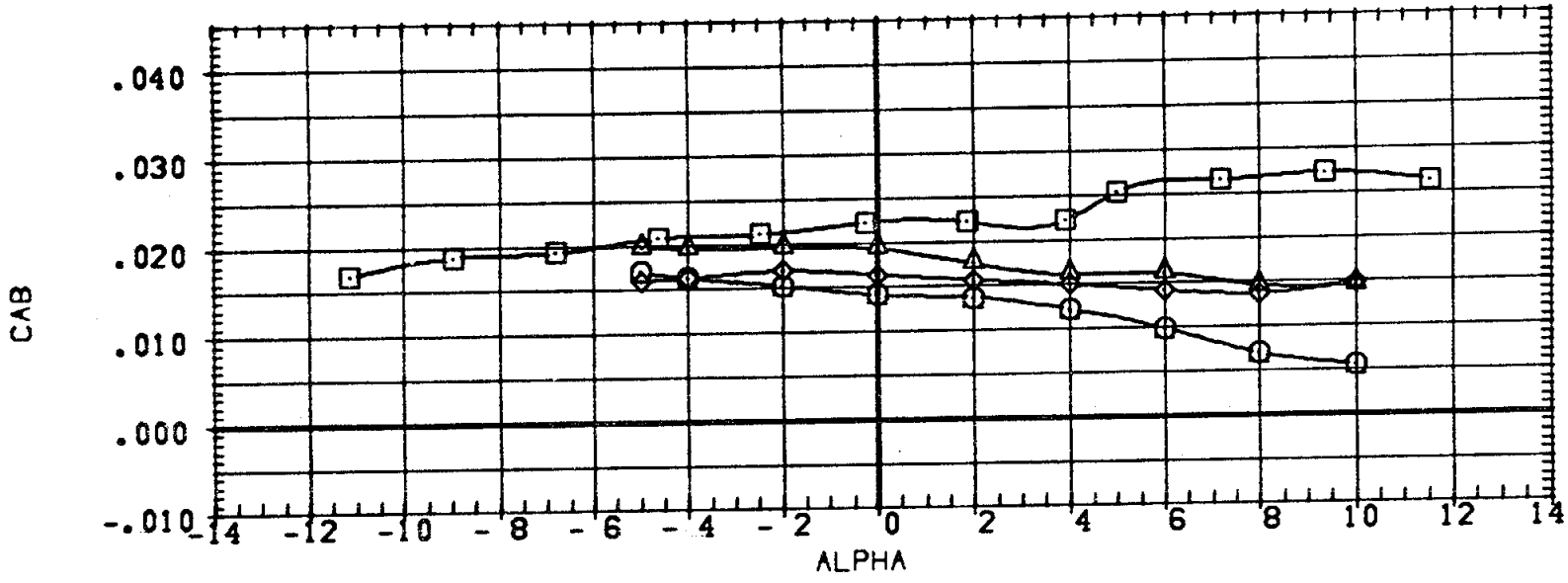
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

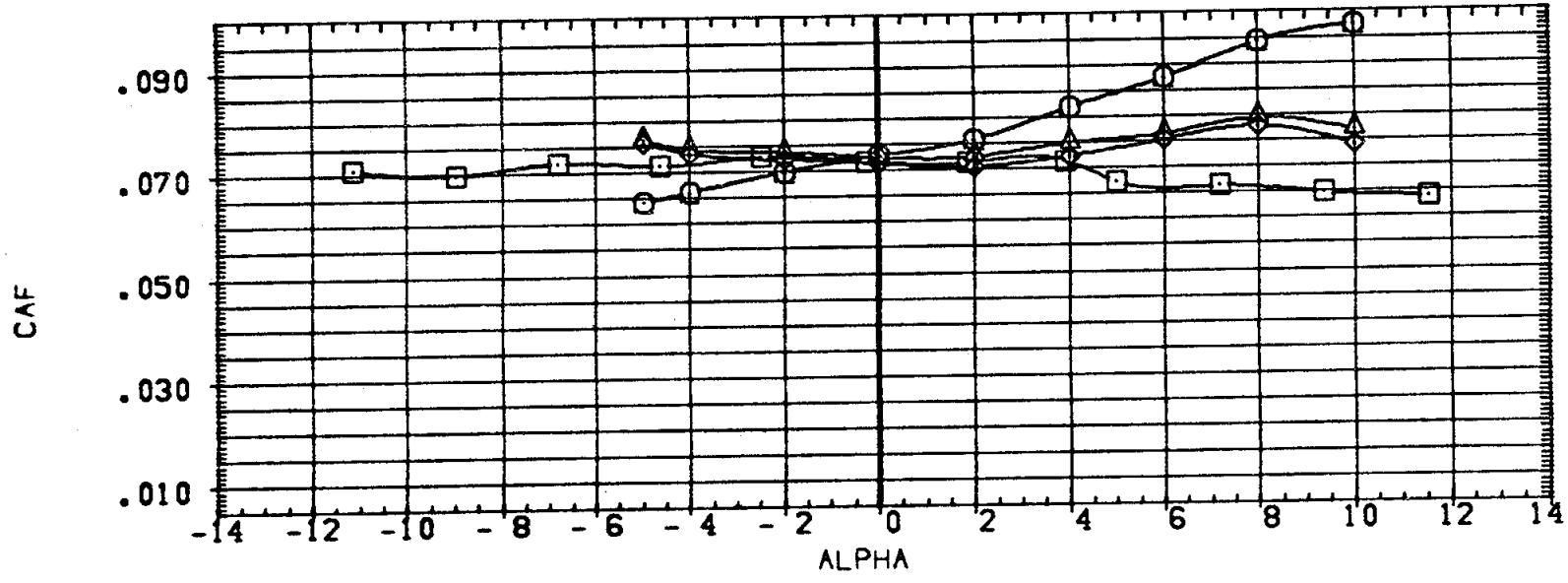
(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	HSFC 545 (IA1) MOD ATP LV-(O1)/(TS)
(A72024)	▽	HSFC 545 (IA1) MOD ATP LV-(O1)/(TS)(S1)
(A72031)	◇	HSFC 545 (IA1) MOD ATP LV-(O1)/(TS)/(S1)
(A72501)	□	HSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



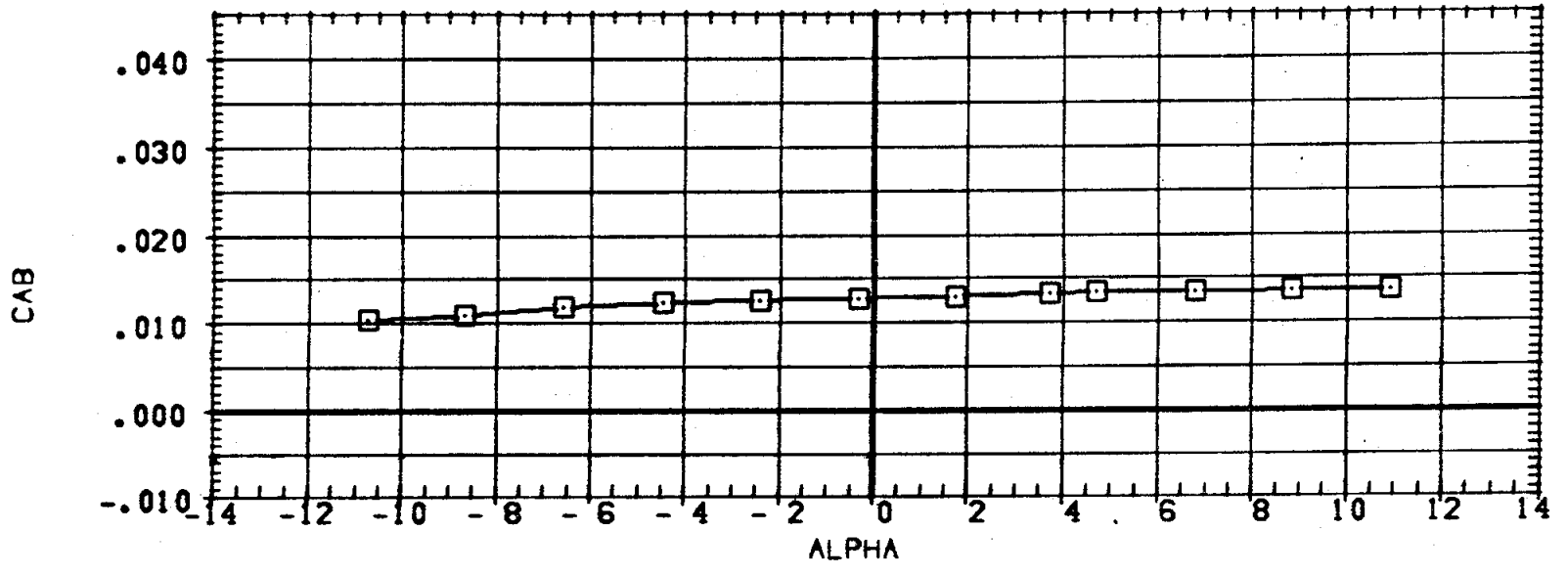


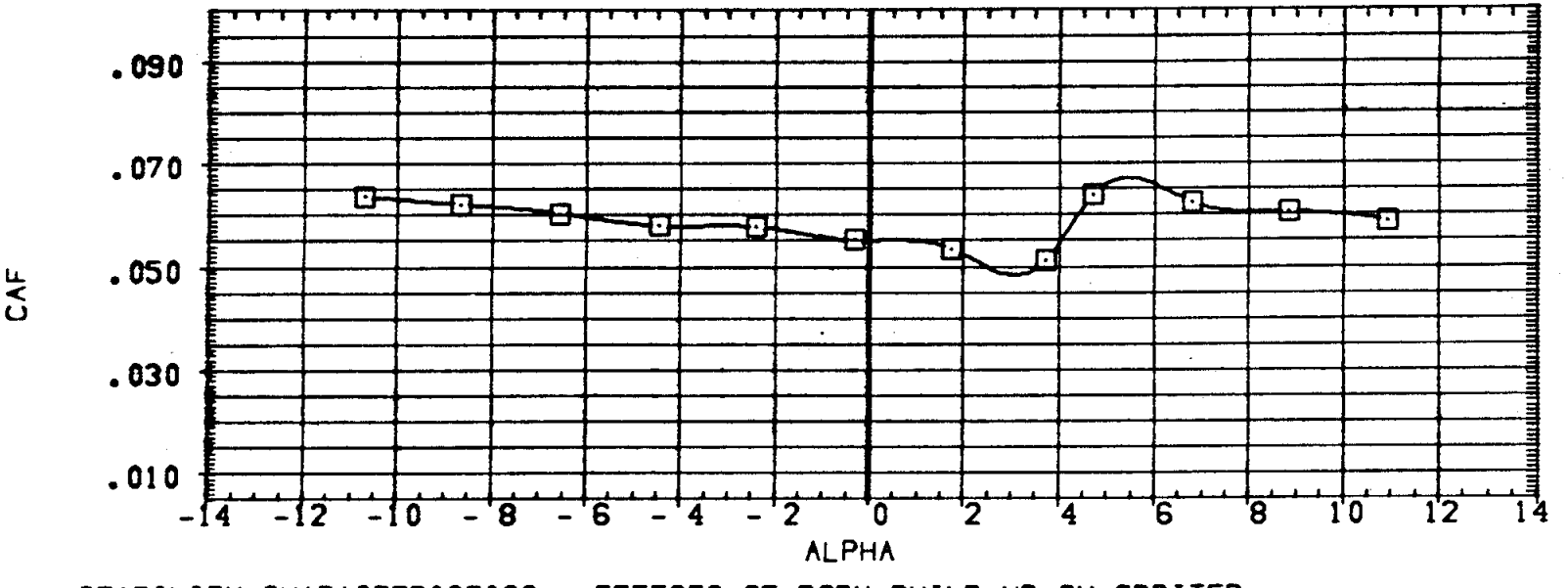
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72008)	○	DATA NOT AVAILABLE	1.500	.120	10.000	
(A72024)	△	DATA NOT AVAILABLE	1.500	.120	10.000	-.624
(A72031)	◇	DATA NOT AVAILABLE	1.500	.120	10.000	-.624
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)			10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





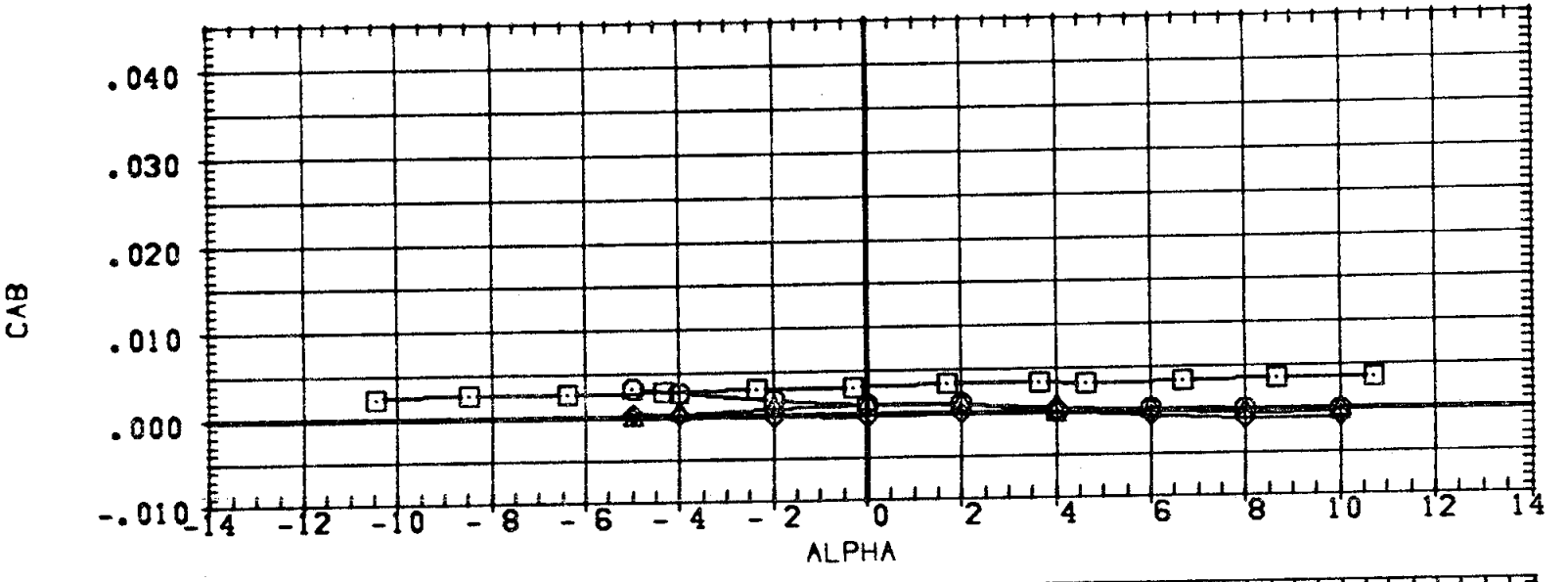
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

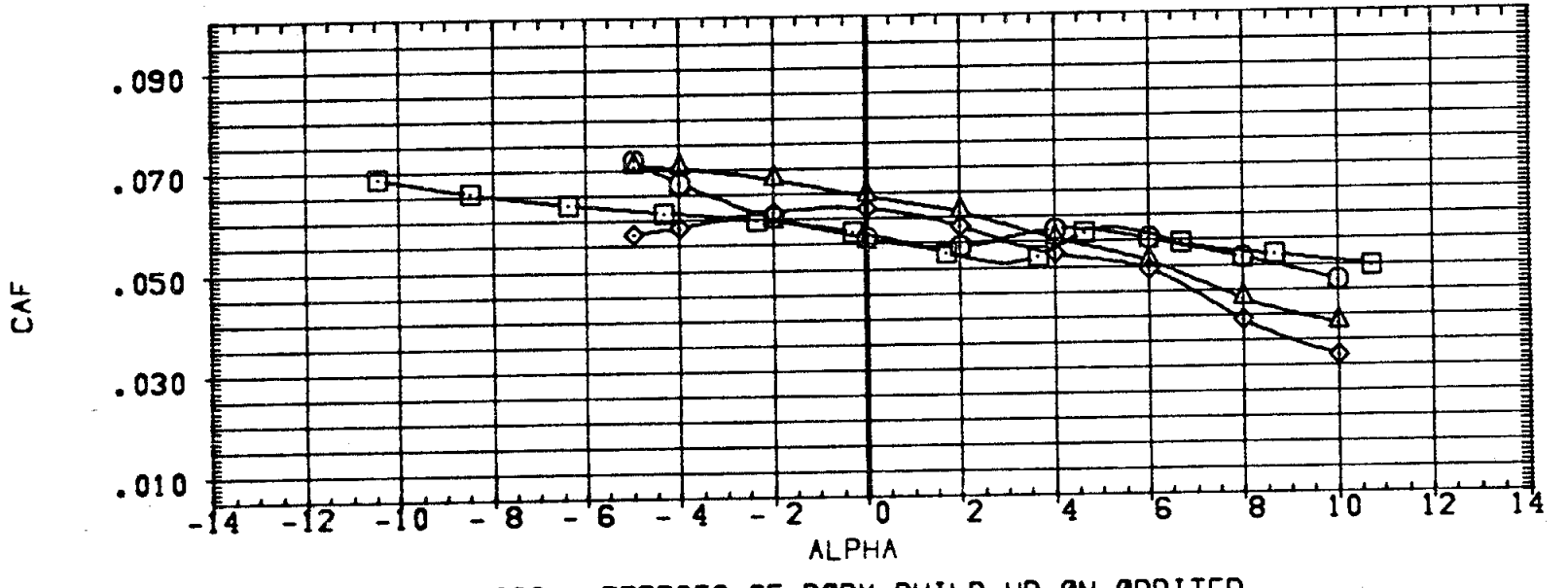
(G)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72003)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(A72024)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72031)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72501)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624
		10.000	

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON ORBITER

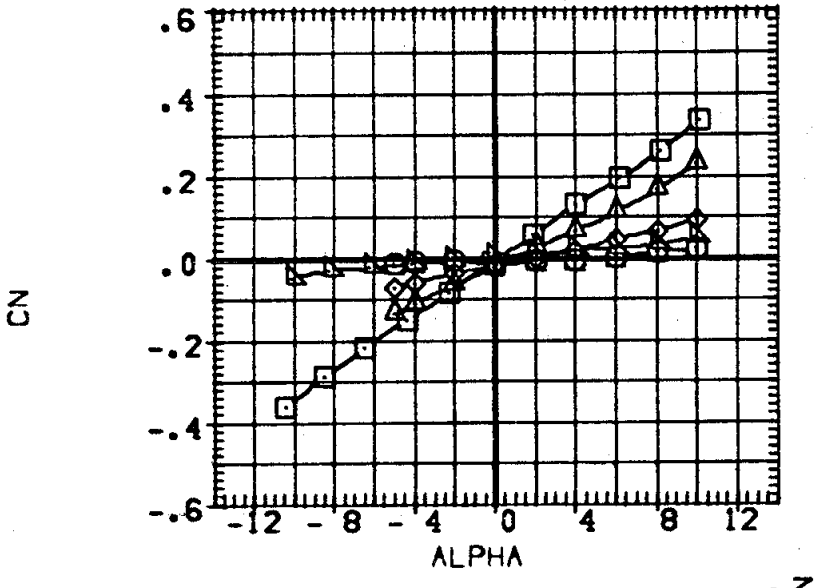
(H)MACH = 4.96

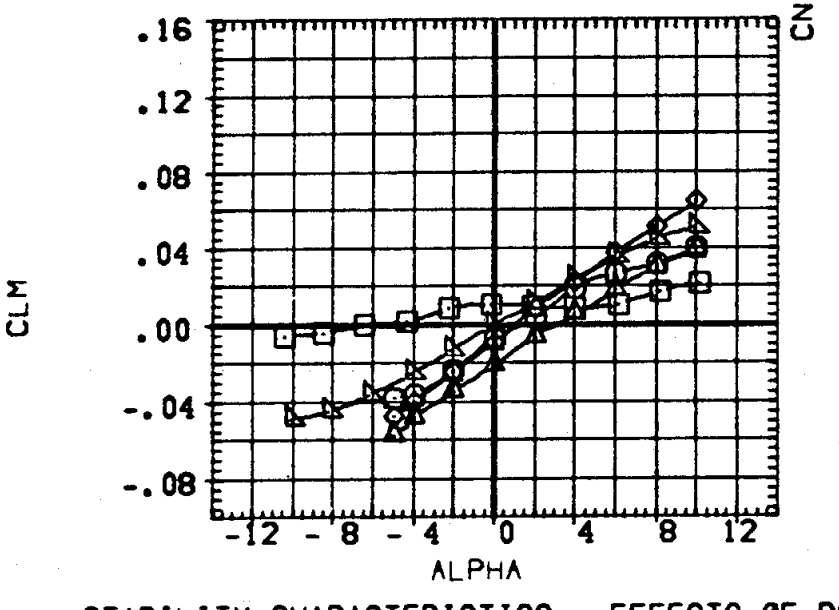
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72108)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72115)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)	☒	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)	☒	MSFC 545 (IA1) NAR ATP BL LV-(TS)

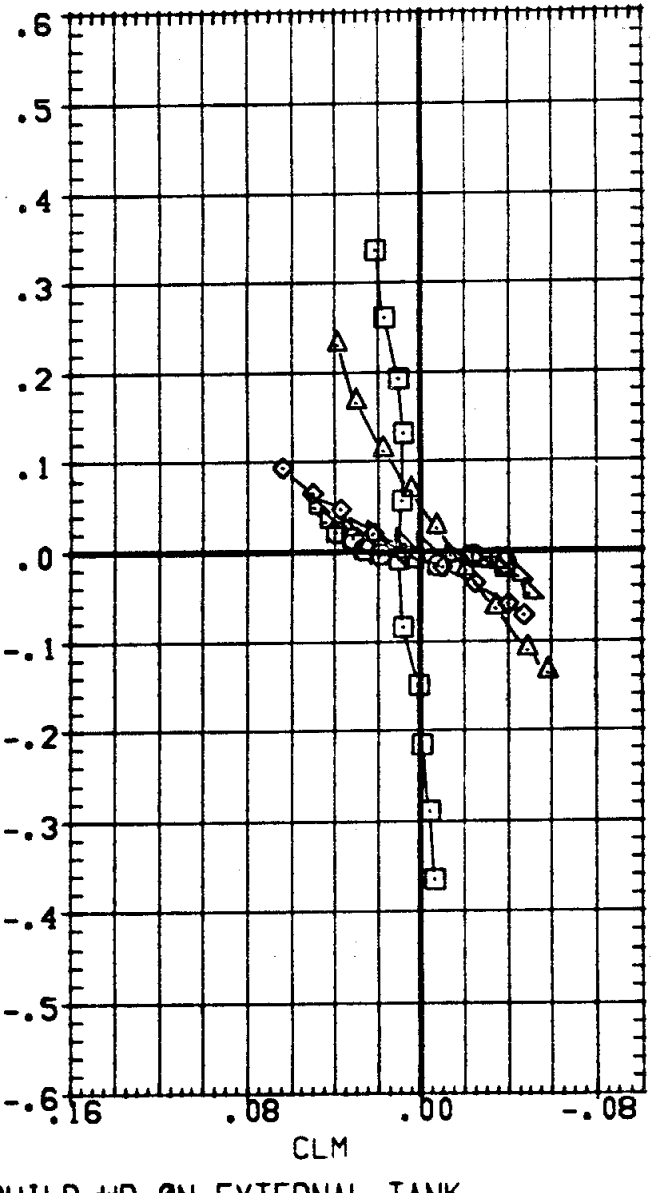
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

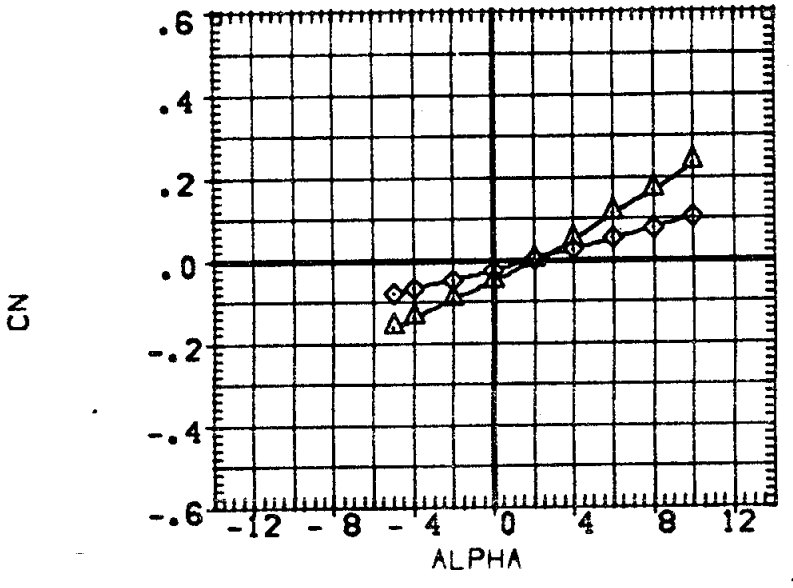
(A)MACH = .60

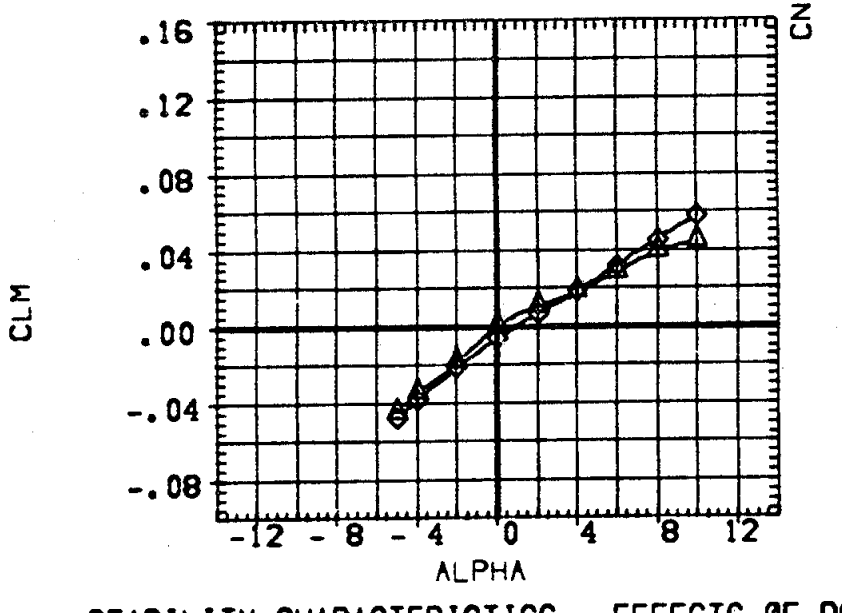
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)		DATA NOT AVAILABLE
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)		DATA NOT AVAILABLE
(A72601)		DATA NOT AVAILABLE

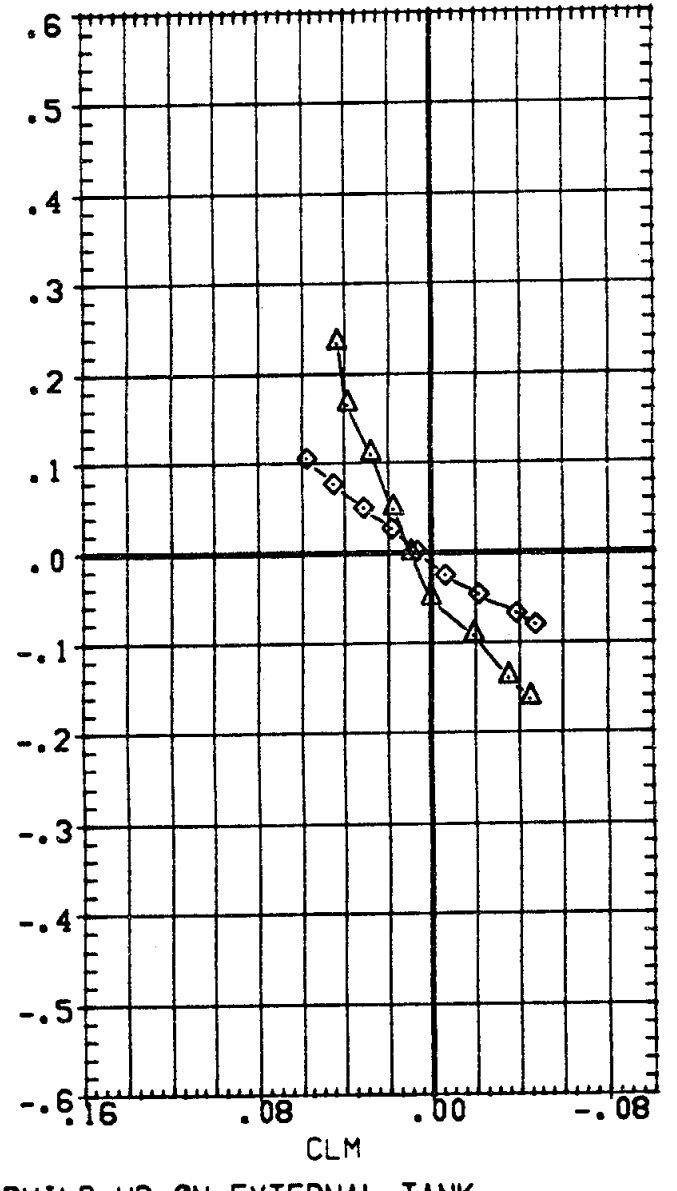
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

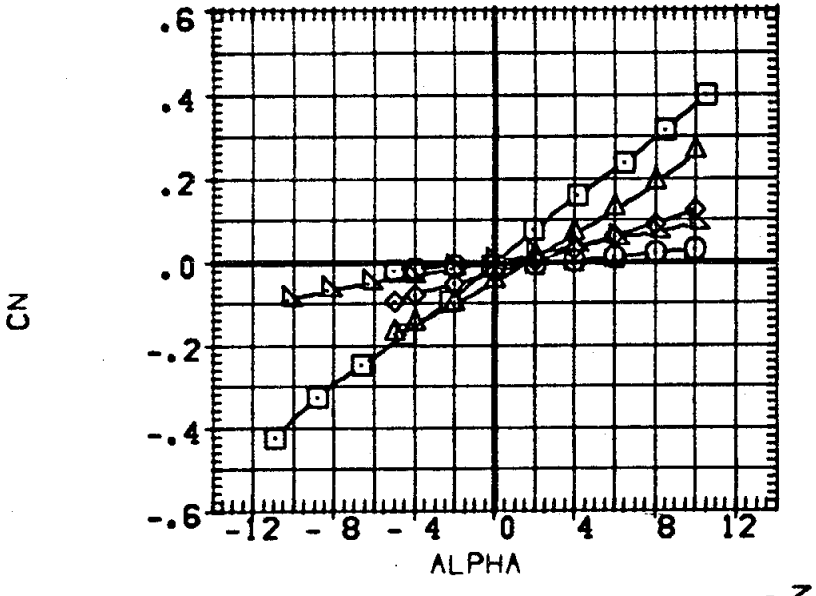
(B)MACH = .80

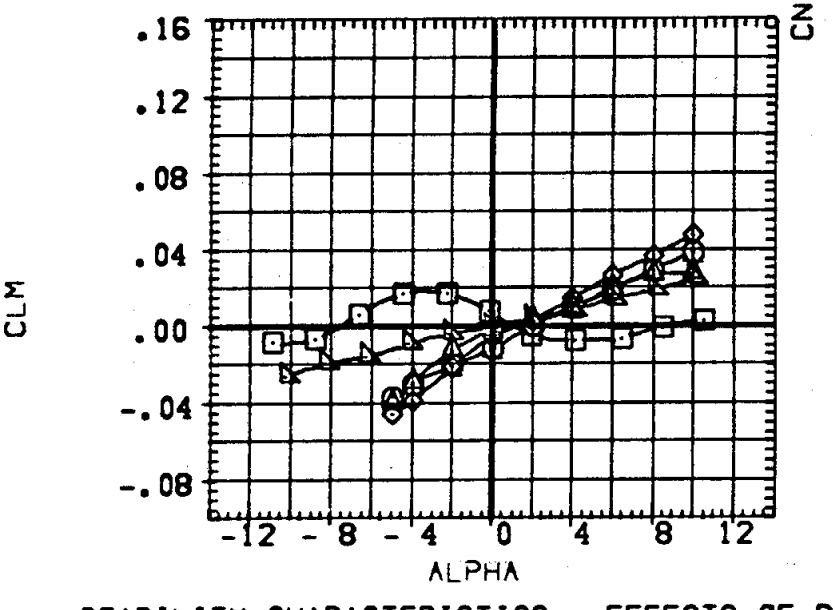
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72108)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72115)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)

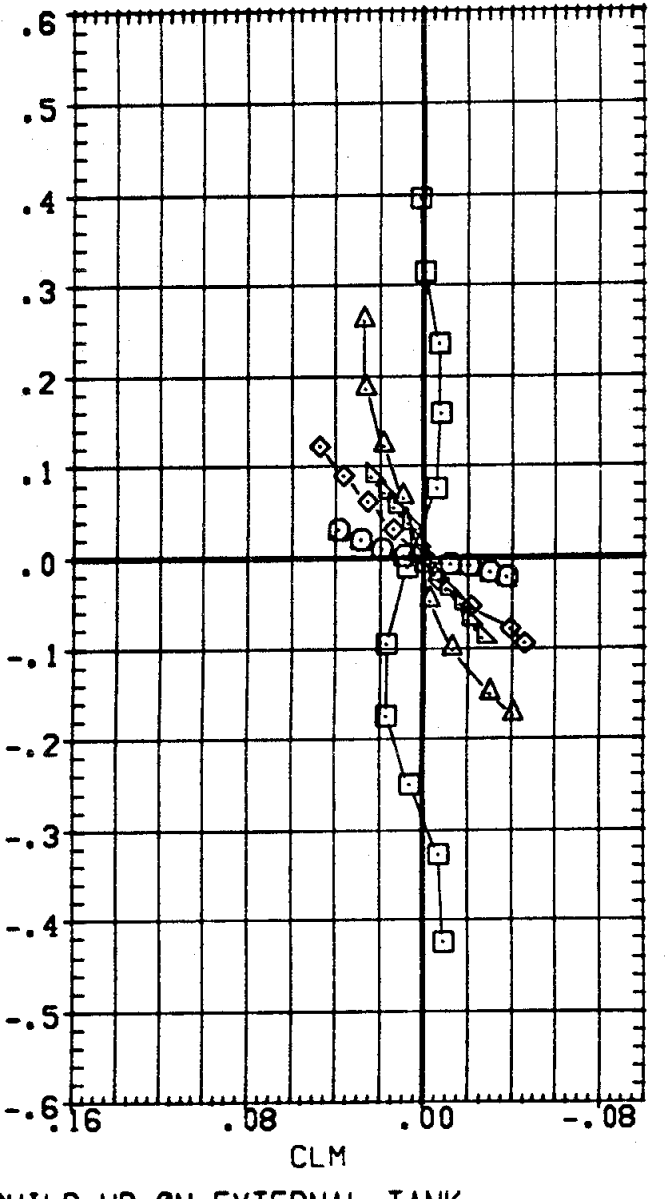
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

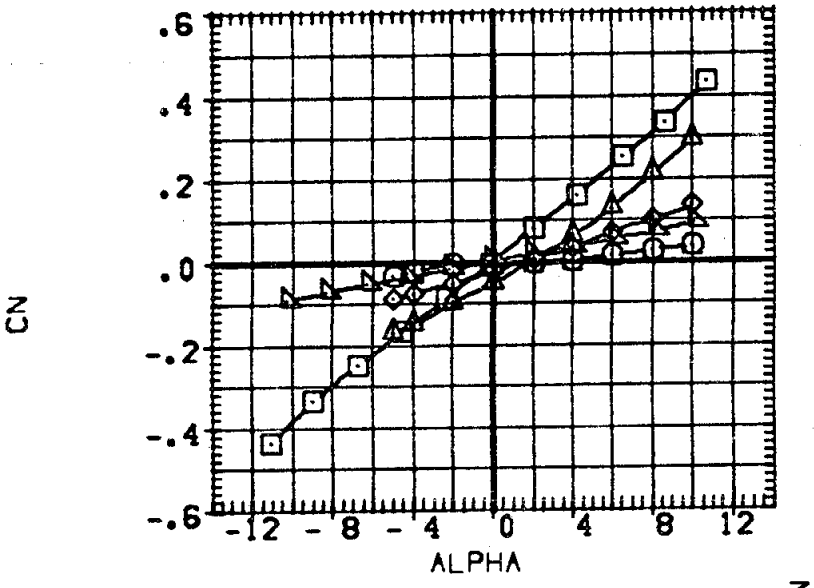
(C)MACH = .90

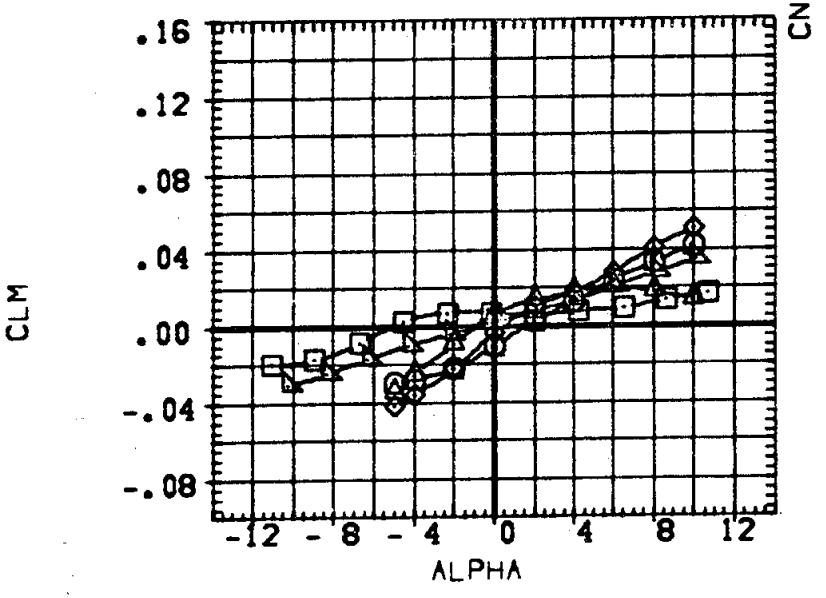
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72108)	□	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72115)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)	△	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(TS)

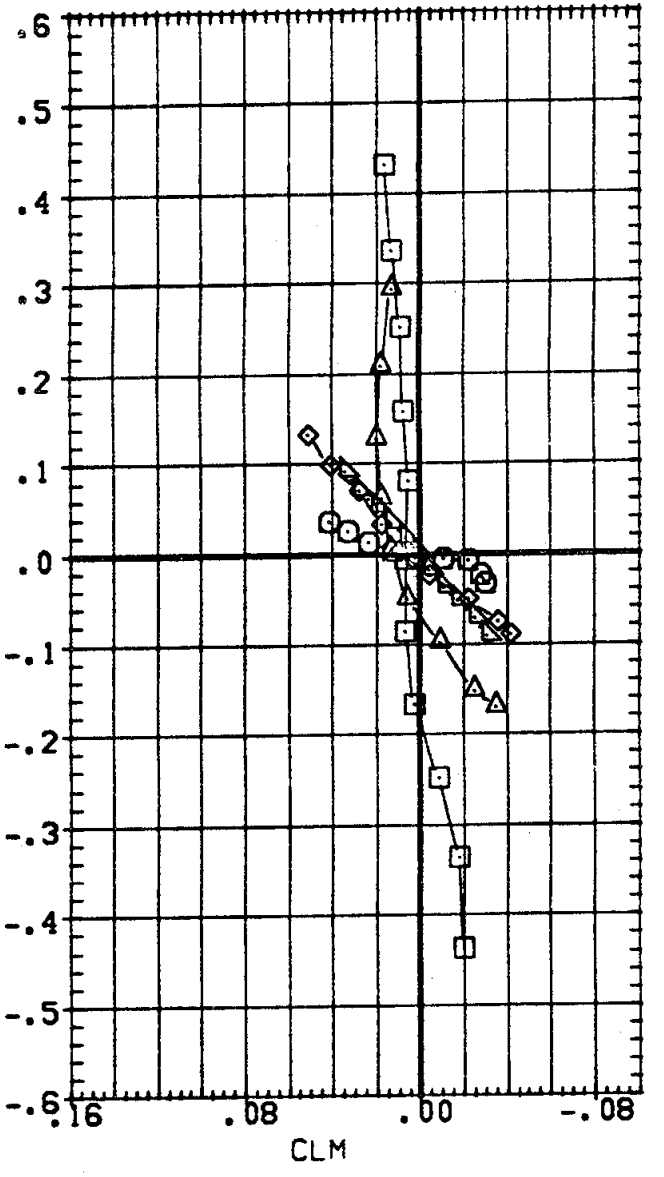
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







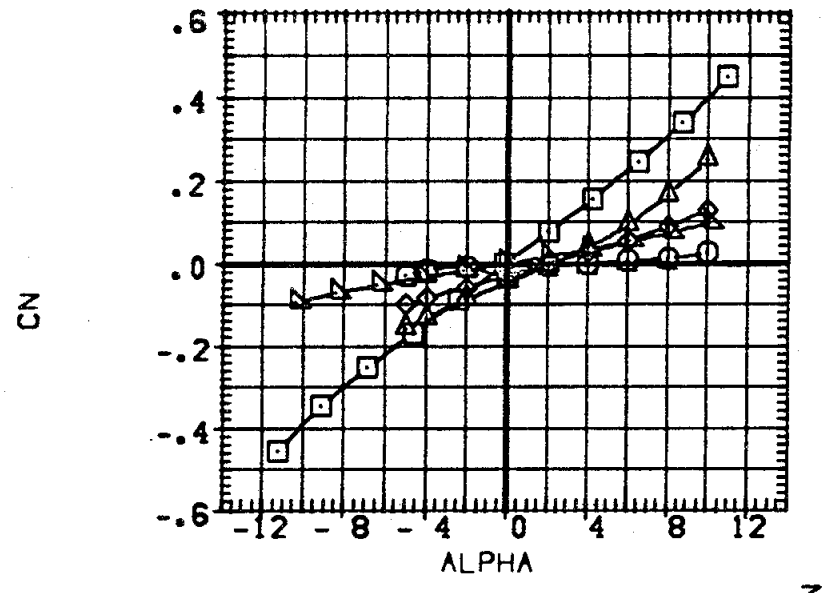
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

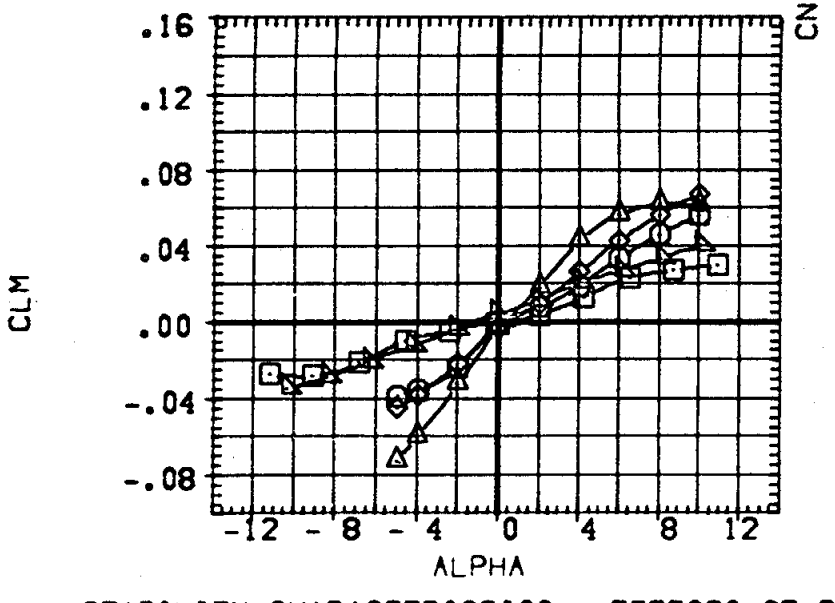
(D)MACH = 1.00

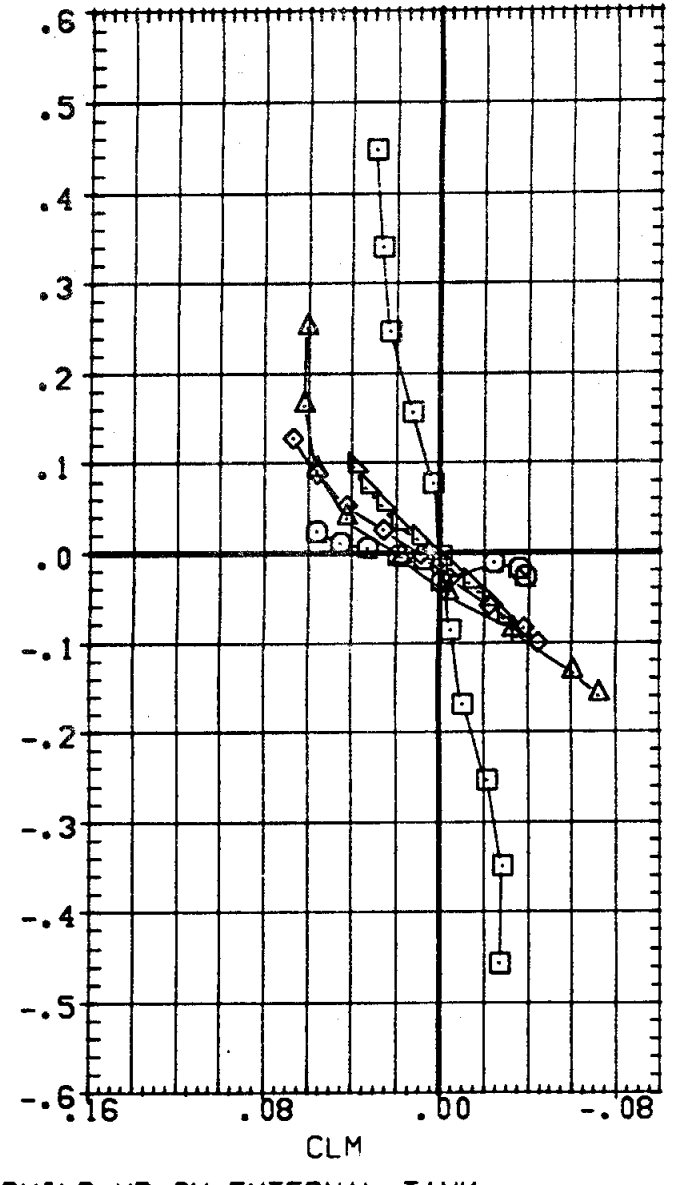
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC S4S (IA1) MOD ATP LV-(T3)/(O1)
(A72106)	△	MSFC S4S (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72119)	◇	MSFC S4S (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC S4S (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC S4S (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







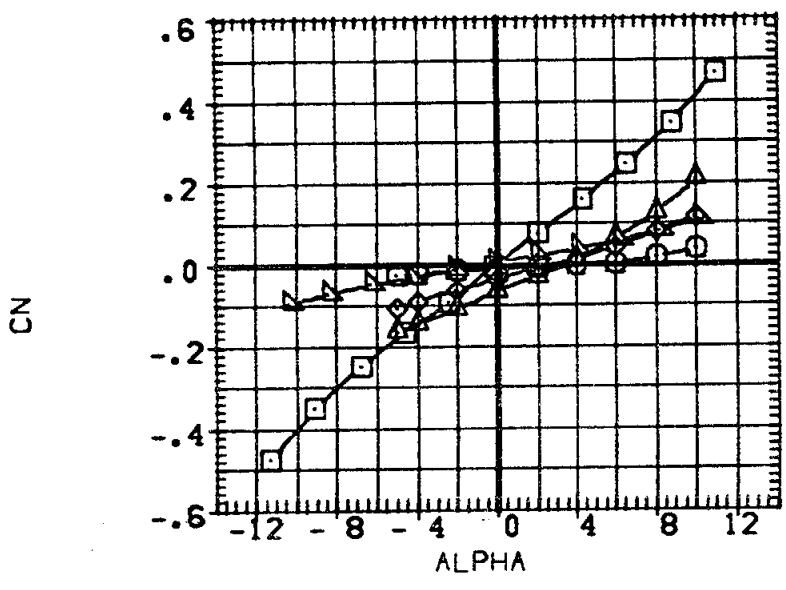
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

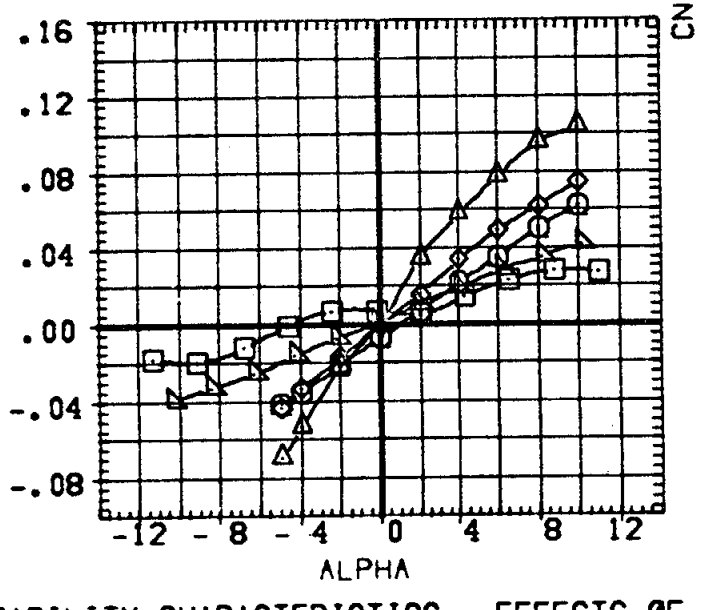
(E)MACH = 1.21

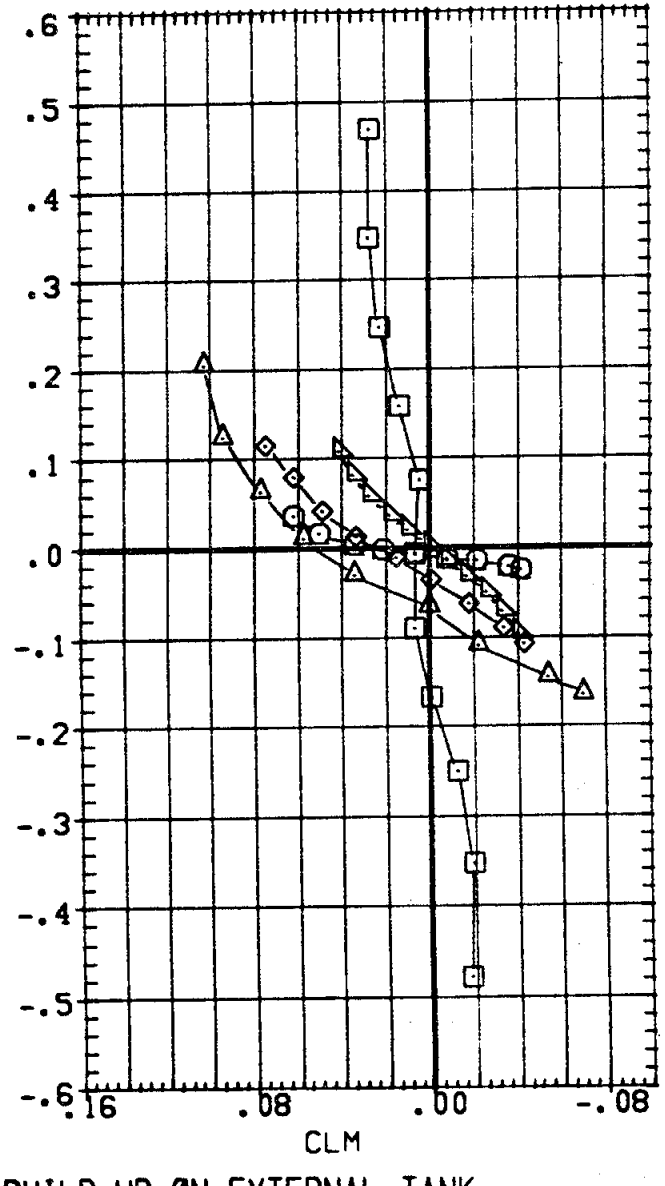
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)		MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)		MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1320.0000	IN.
BREF	1320.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







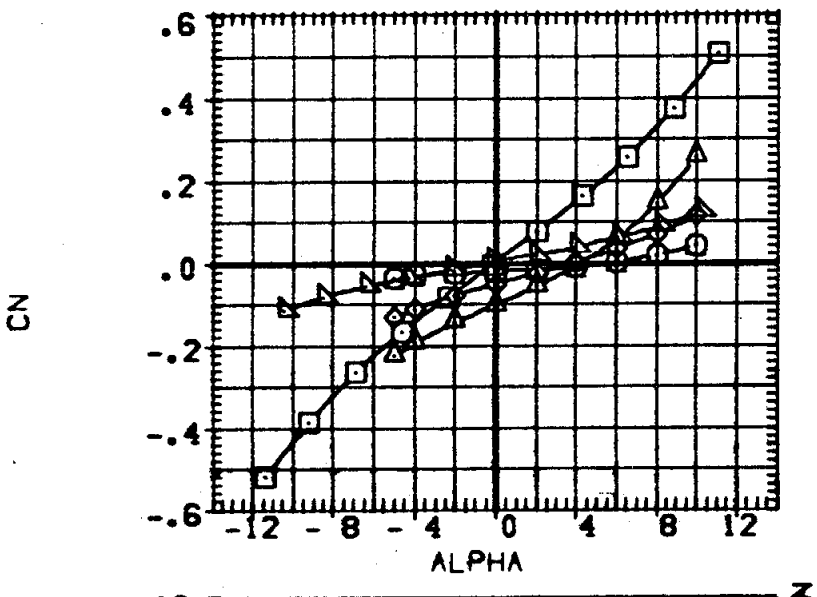
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

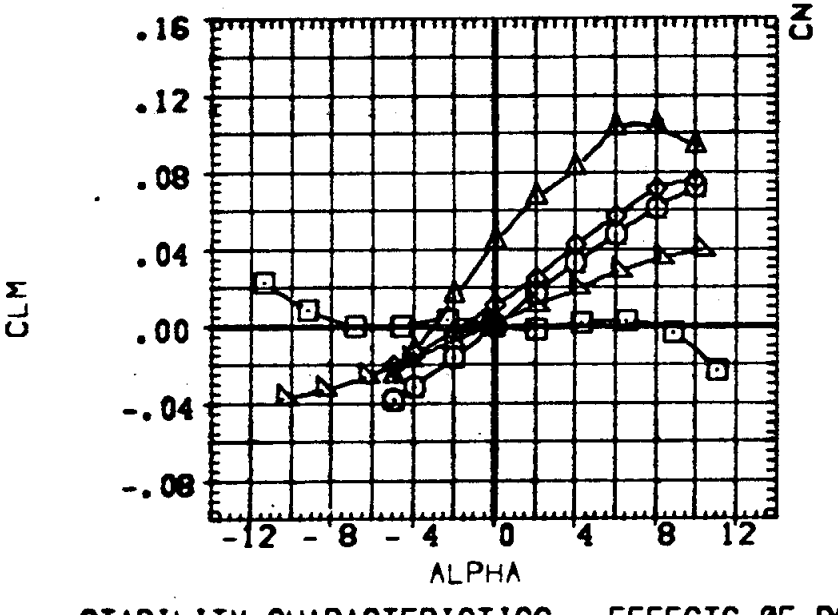
(F)MACH = 1.46

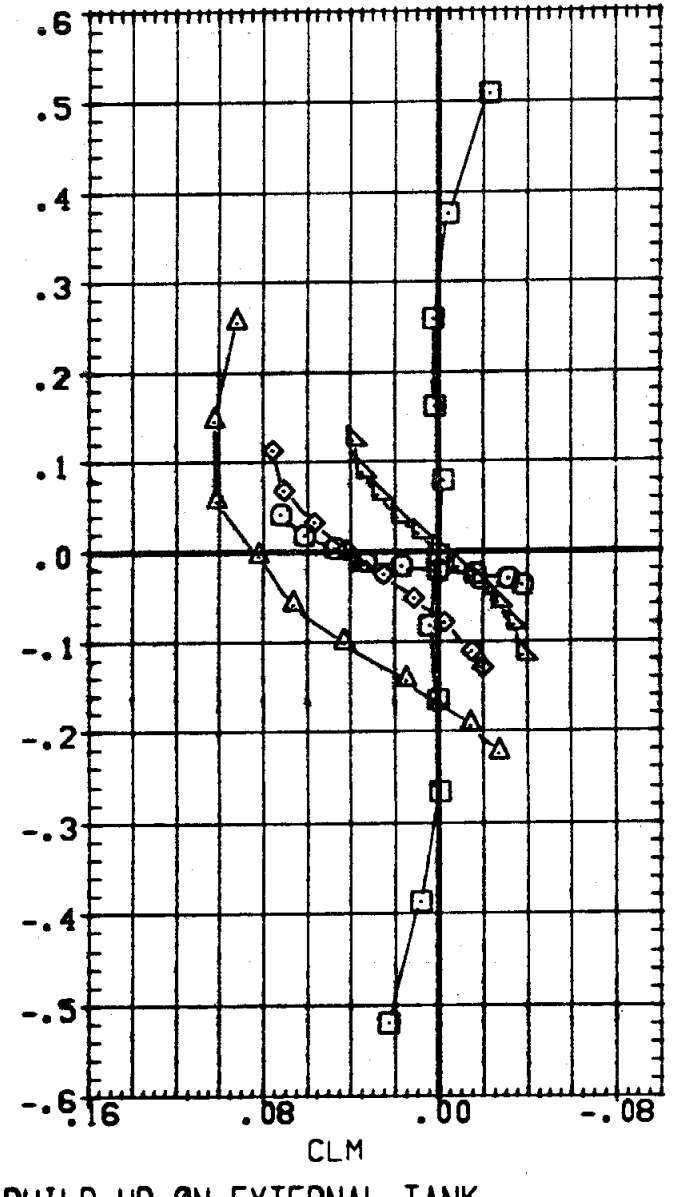
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(O1)
(A72106)	⊠	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)
(A72115)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	▽	MSFC 545 (1A1) NAR ATP BL LV-(T3)(S1)
(A72601)	△	MSFC 545 (1A1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

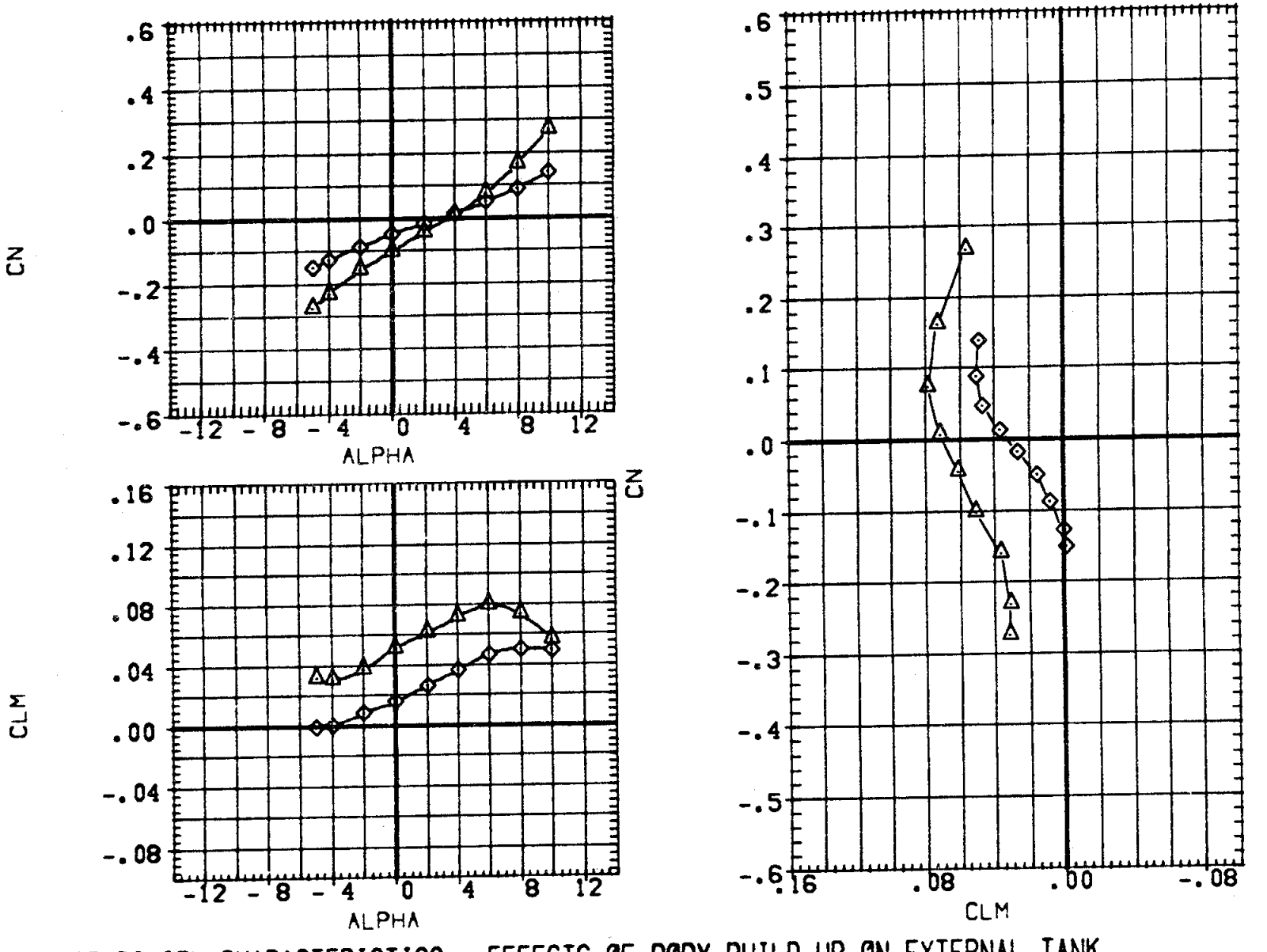
(G)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)		DATA NOT AVAILABLE
(A72106)		MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72115)		MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)		DATA NOT AVAILABLE
(A72601)		DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

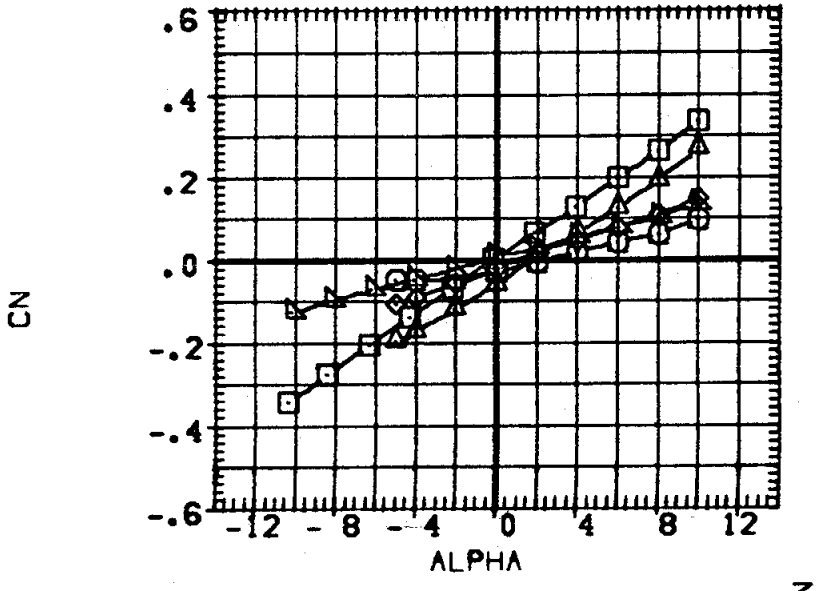
(H)MACH = 2.99

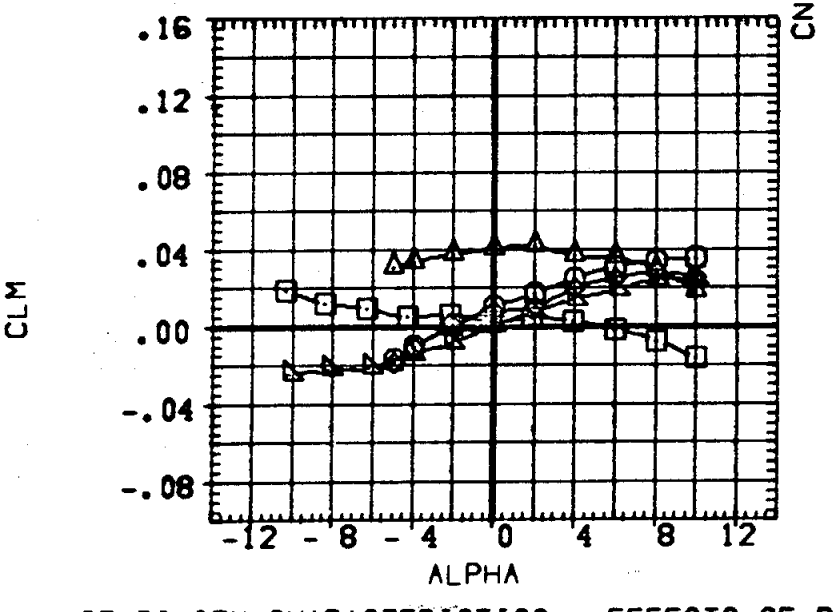
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72108)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72115)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)

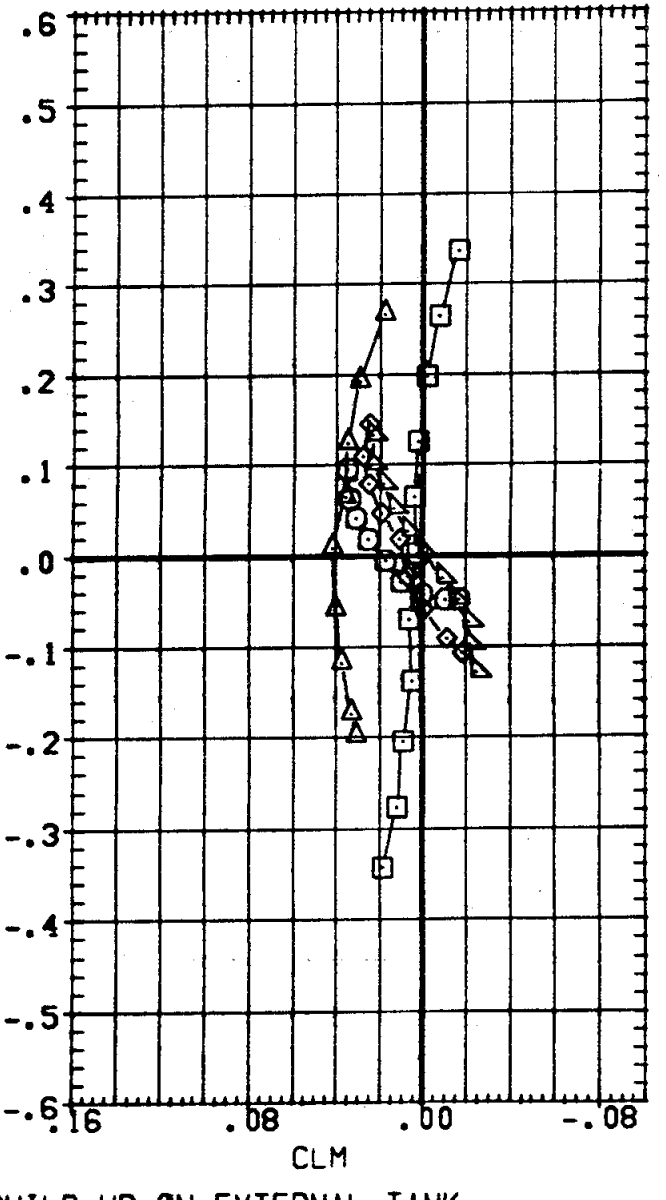
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







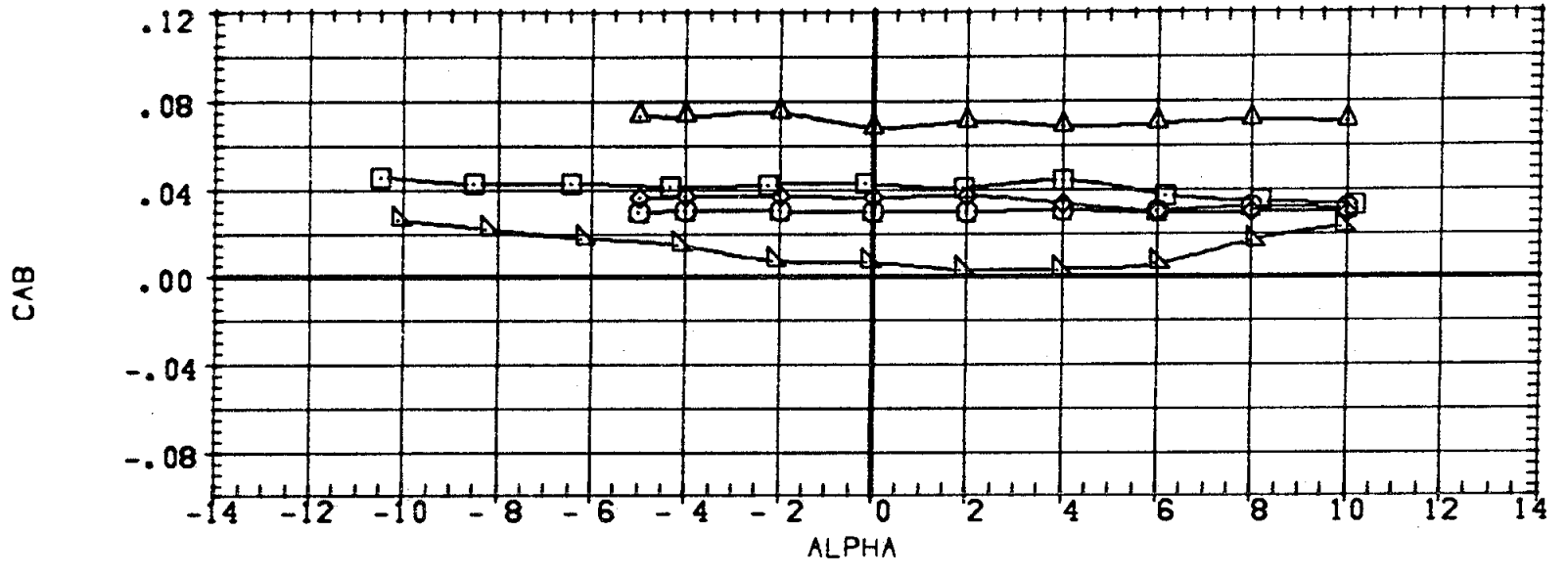
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

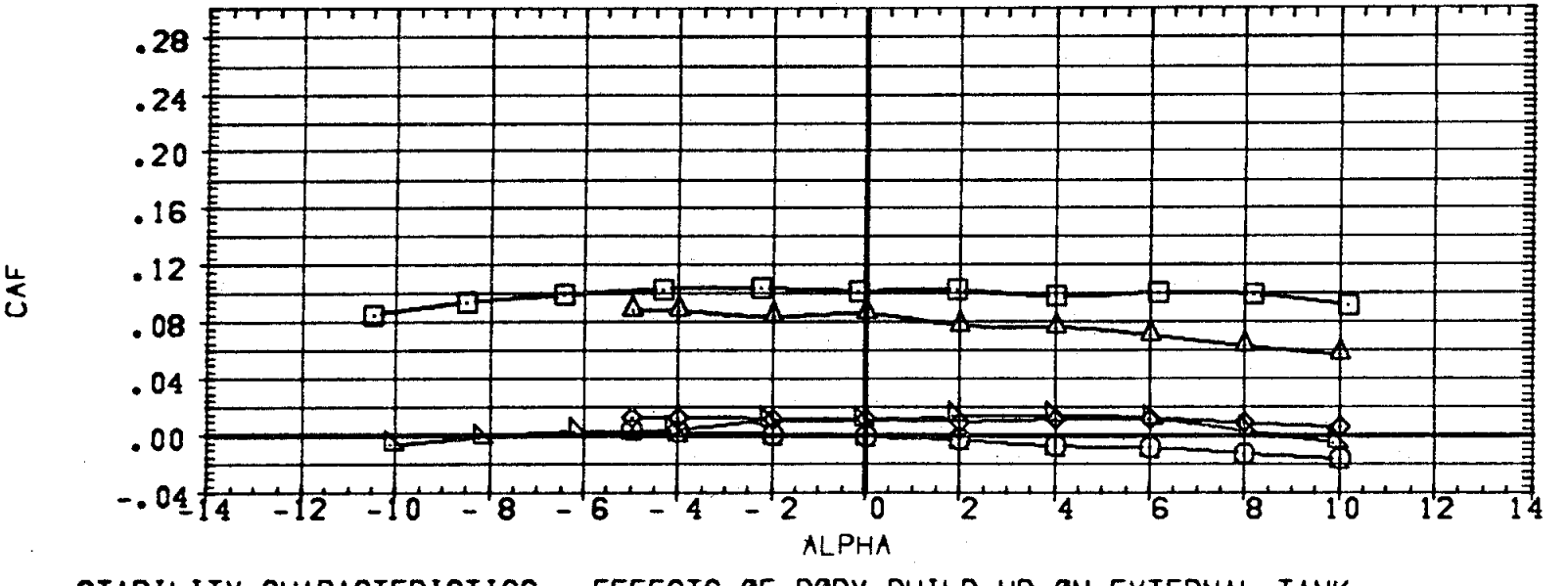
(I)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	.000	.120	10.000	
(A72108)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72115)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72701)		MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				.000
(A72601)		MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





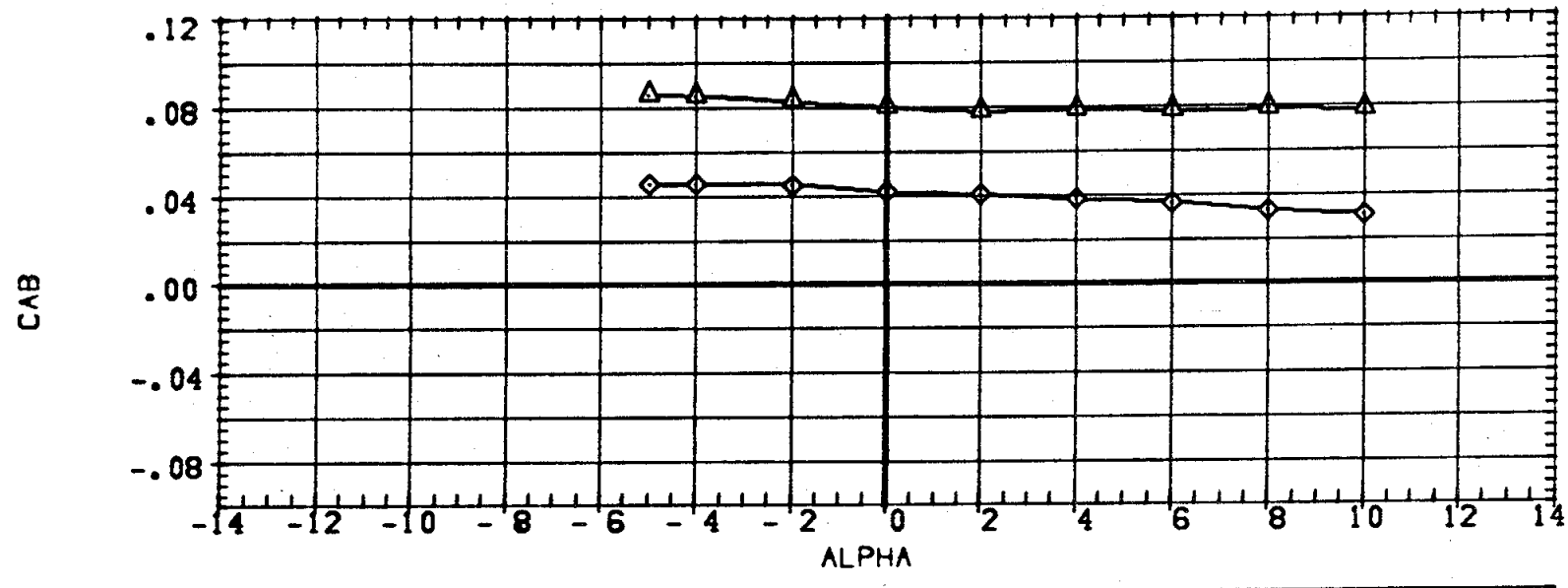
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

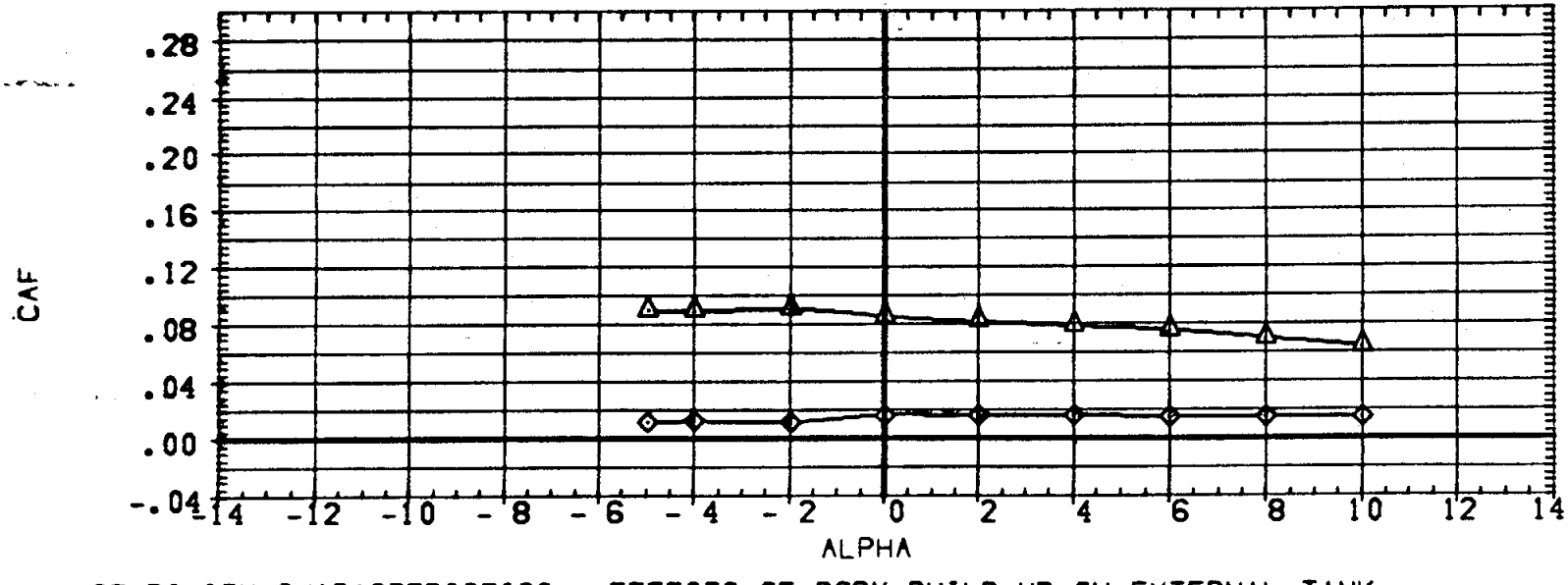
(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)		DATA NOT AVAILABLE	.000	.120	10.000	
(A72106)	△	MSFC 545 (1A1) MOD ATP LV-(TS)(S1)/(O1)	.000	.120	10.000	.000
(A72115)	◇	MSFC 545 (1A1) MOD ATP LV-(TS)/(S1)/(O1)	.000	.120	10.000	.000
(A72701)		DATA NOT AVAILABLE				.000
(A72601)		DATA NOT AVAILABLE				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



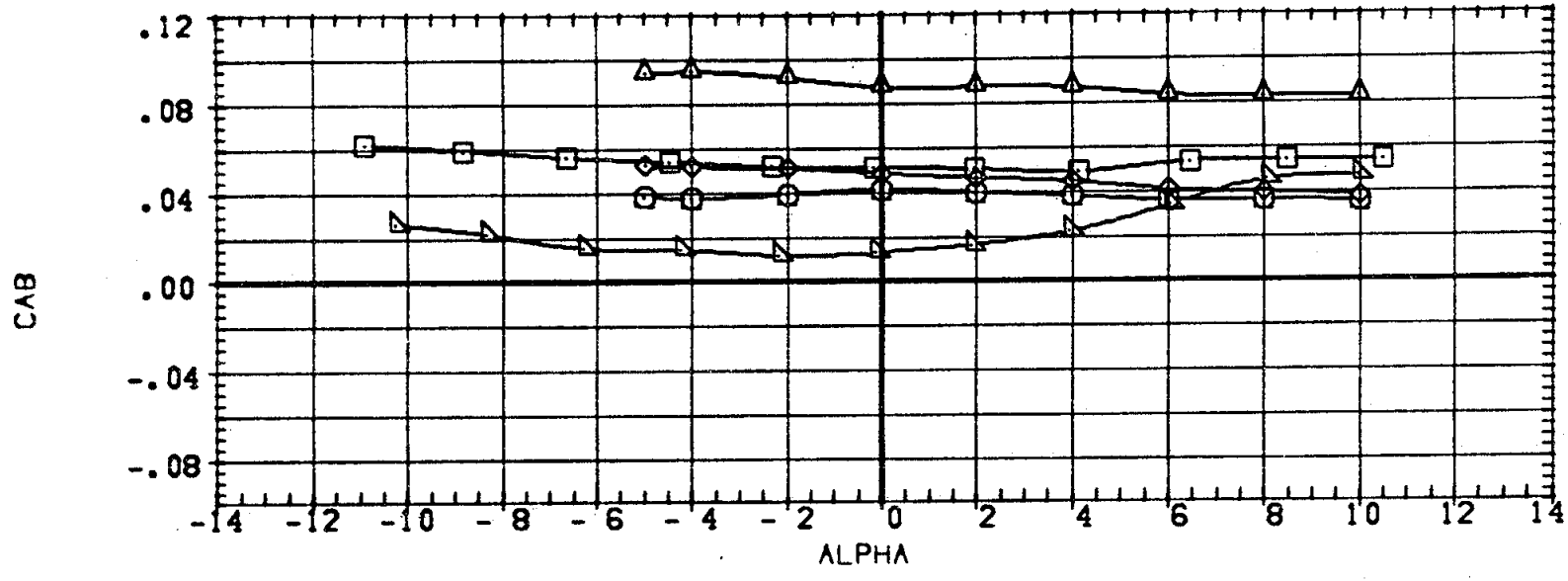


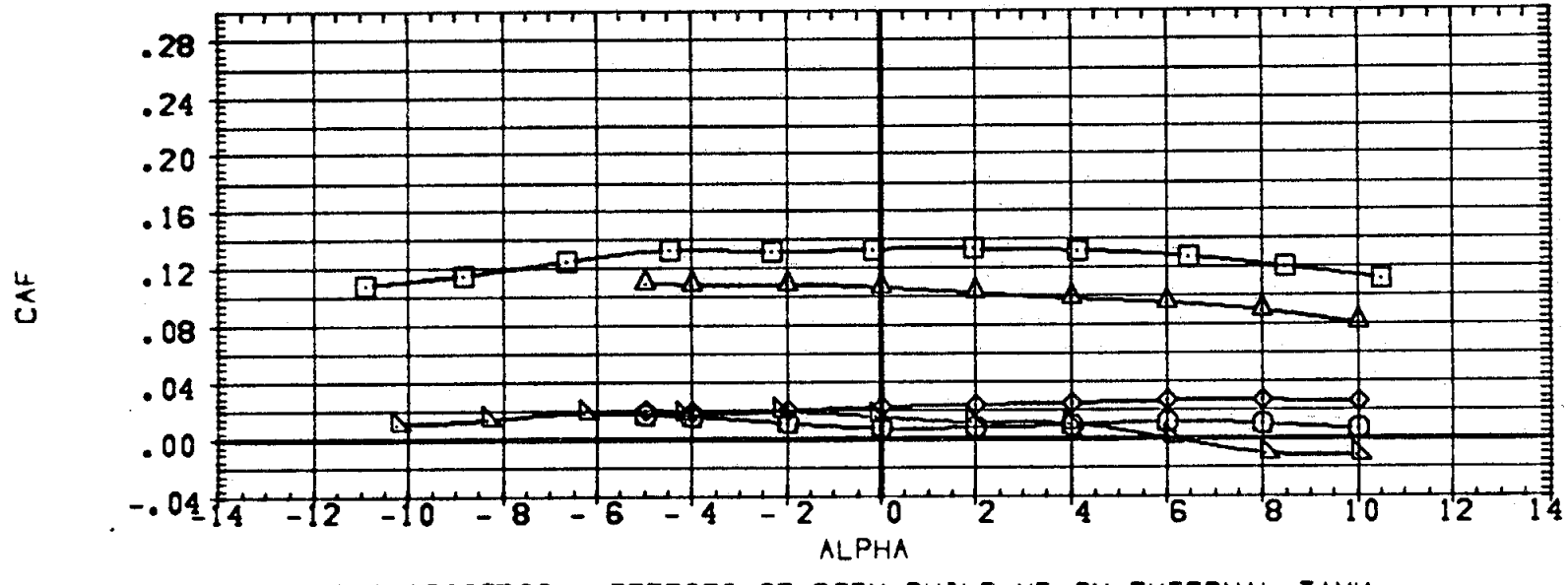
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)		MSFC S4S (IA1) MOD ATP LV-(T3)/(O1)	.000	.120	10.000	
(A72108)		MSFC S4S (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72115)		MSFC S4S (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72701)		MSFC S4S (IA1) NAR ATP BL LV-(T3)(S1)				.000
(A72601)		MSFC S4S (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





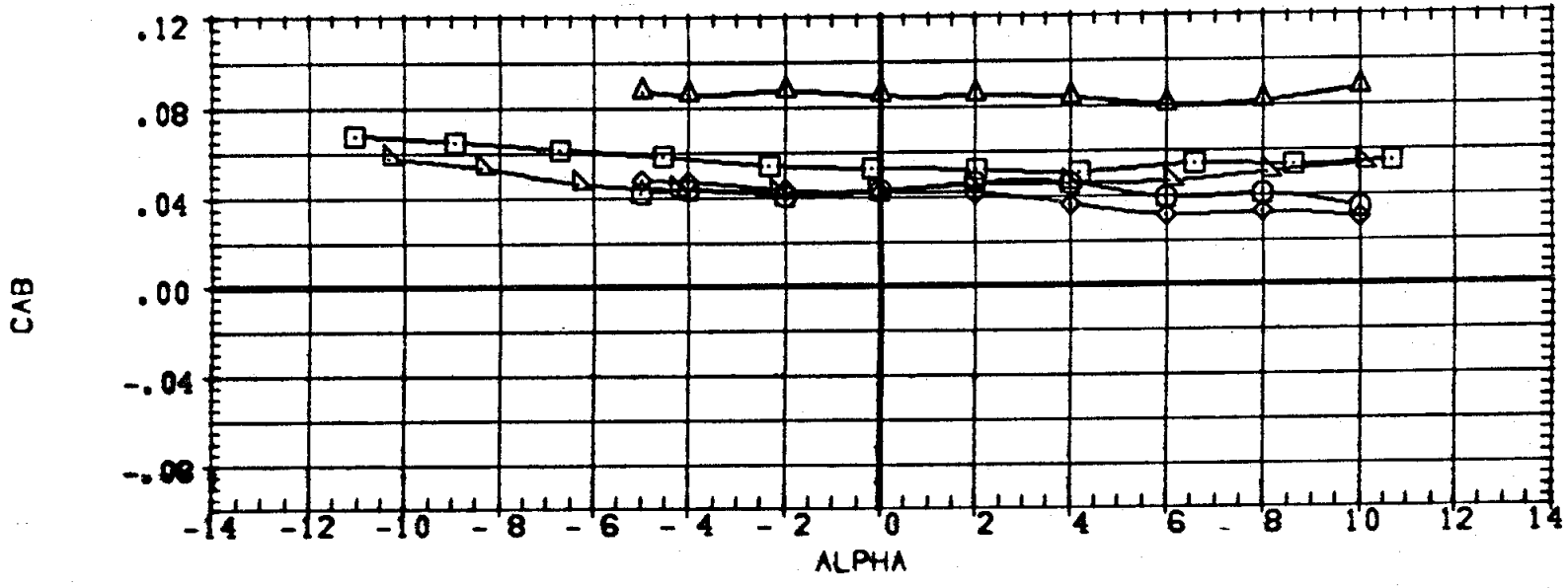
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

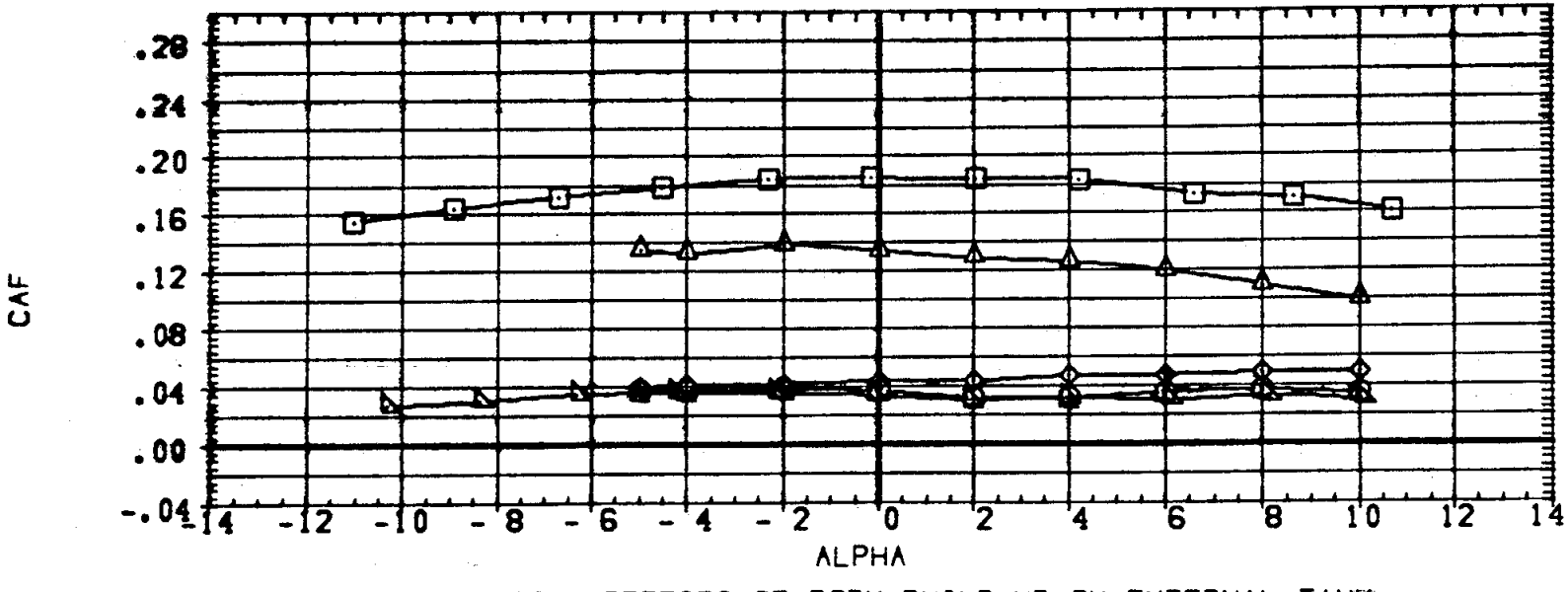
(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	.000	.120	10.000	
(A72106)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72115)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				.000
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





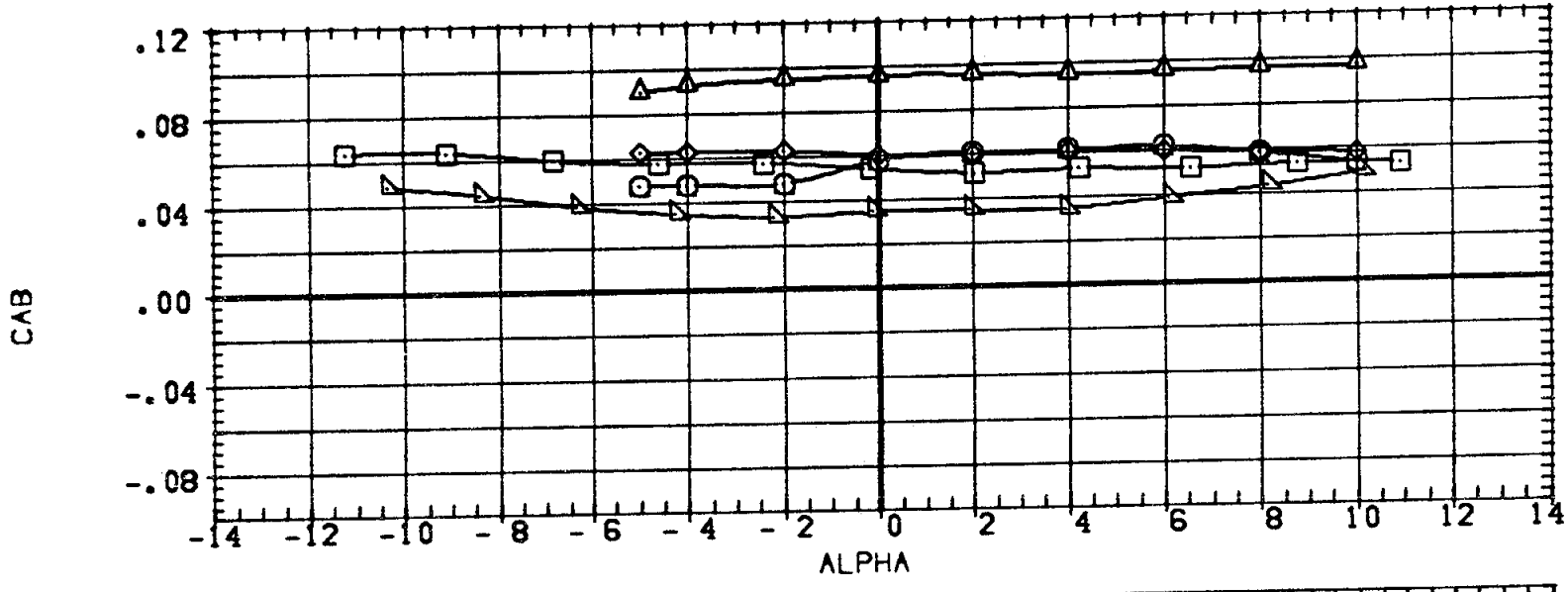
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

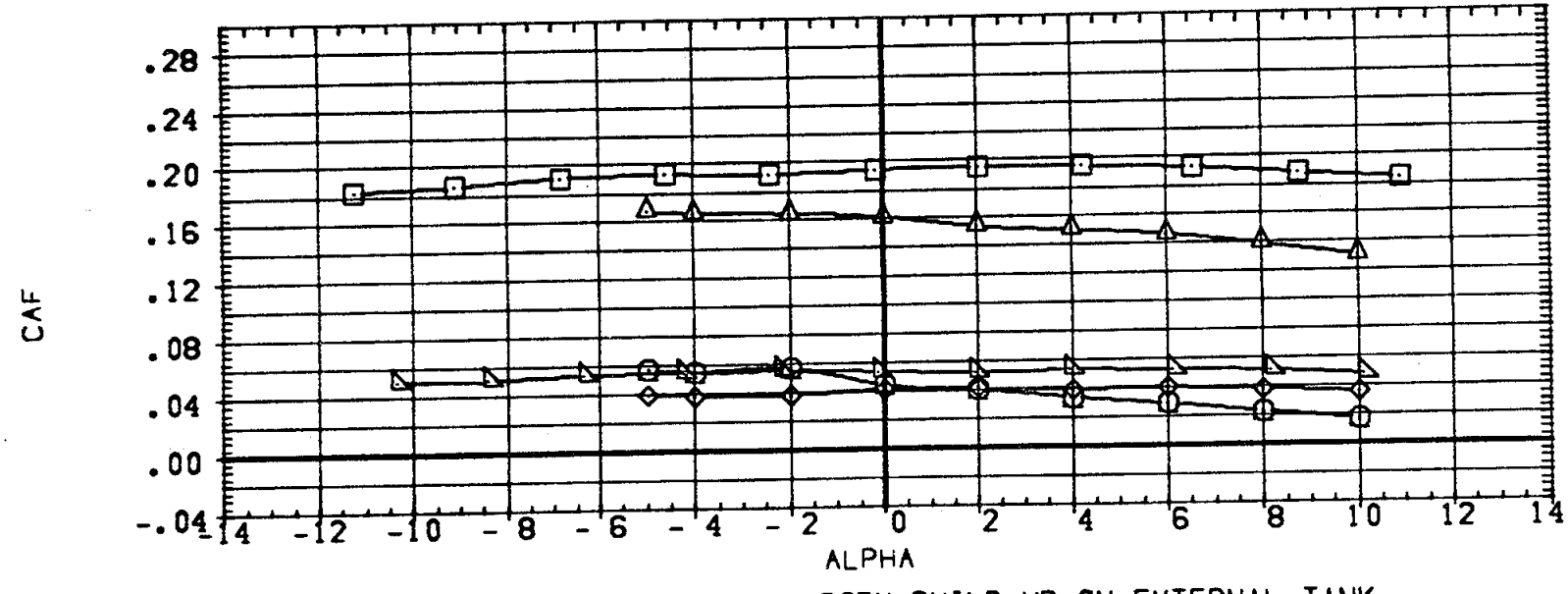
(D)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	.000	.120	10.000	
(A72108)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	.000
(A72115)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	.000
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				.000
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





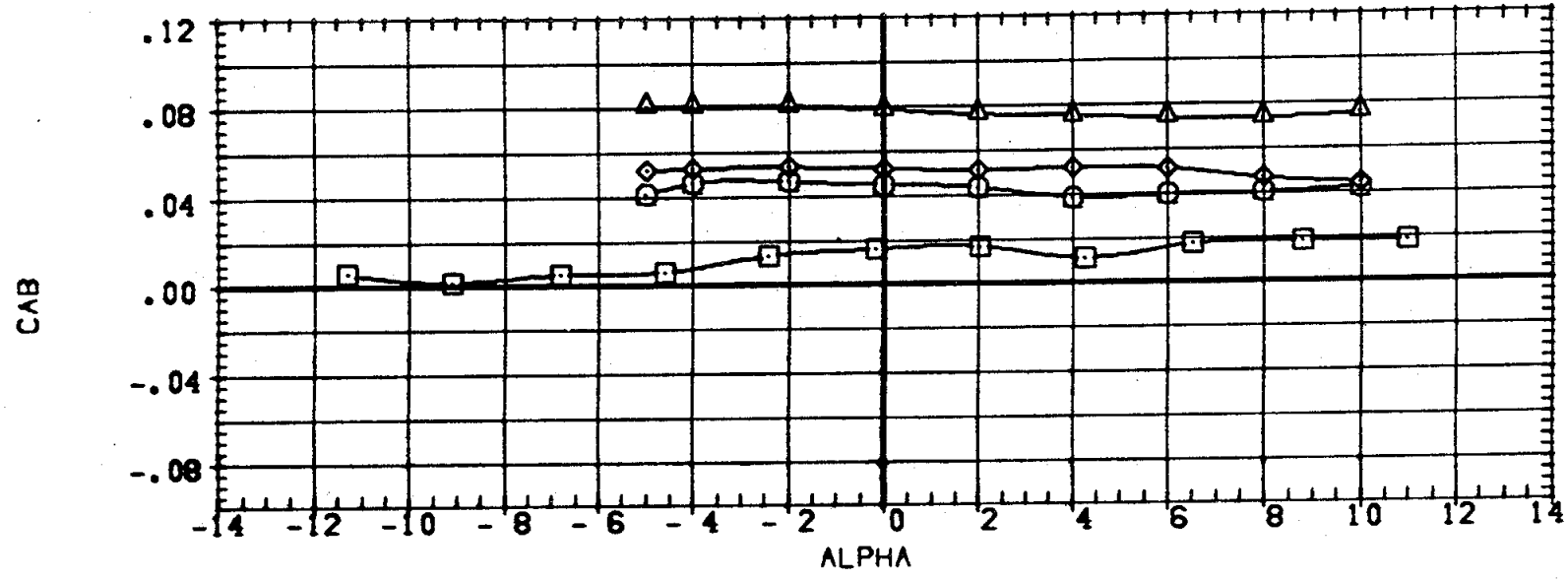
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

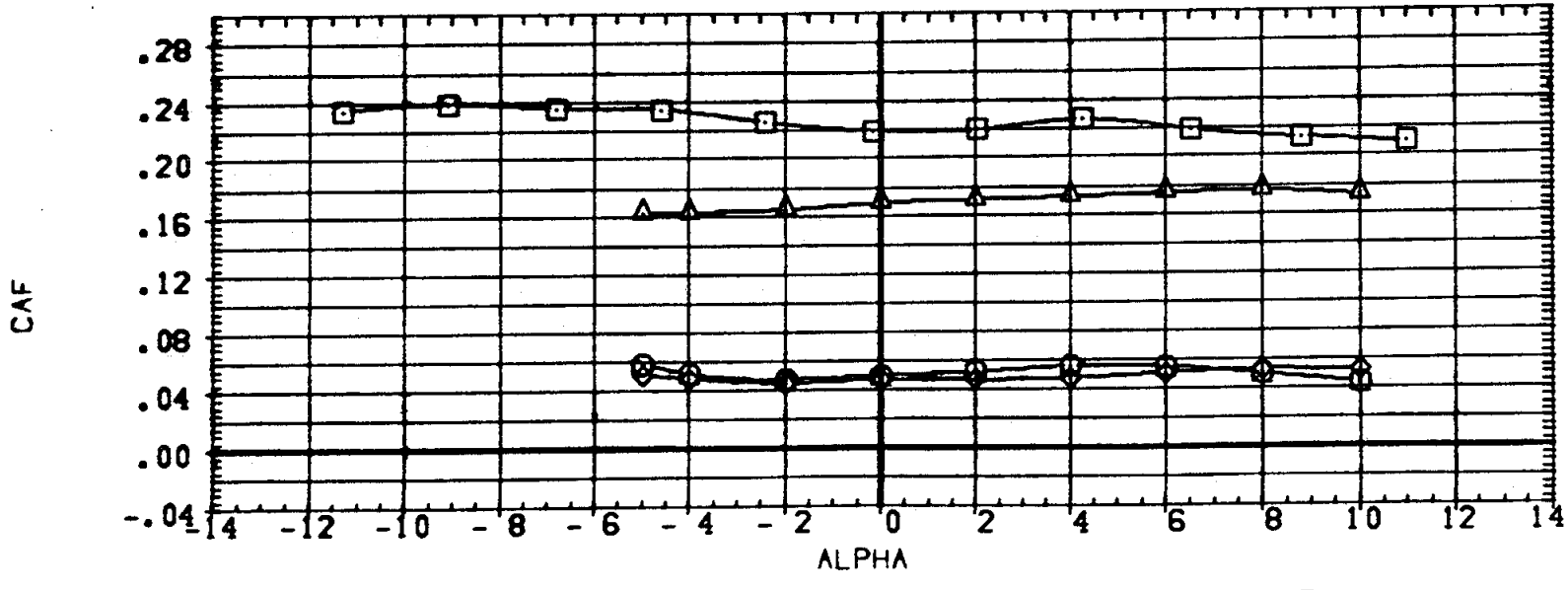
(E)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	○	MSFC 545 (1A1) MOD ATP LV-(TS)/(O1)	.000	.120	10.000	
(A72106)	△	MSFC 545 (1A1) MOD ATP LV-(TS)(S1)/(O1)	.000	.120	10.000	.000
(A72115)	◇	MSFC 545 (1A1) MOD ATP LV-(TS)/(S1)/(O1)	.000	.120	10.000	.000
(A72701)	□	MSFC 545 (1A1) NAR ATP BL LV-(TS)(S1)				.000

REFERENCE INFORMATION

SREF	3228.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



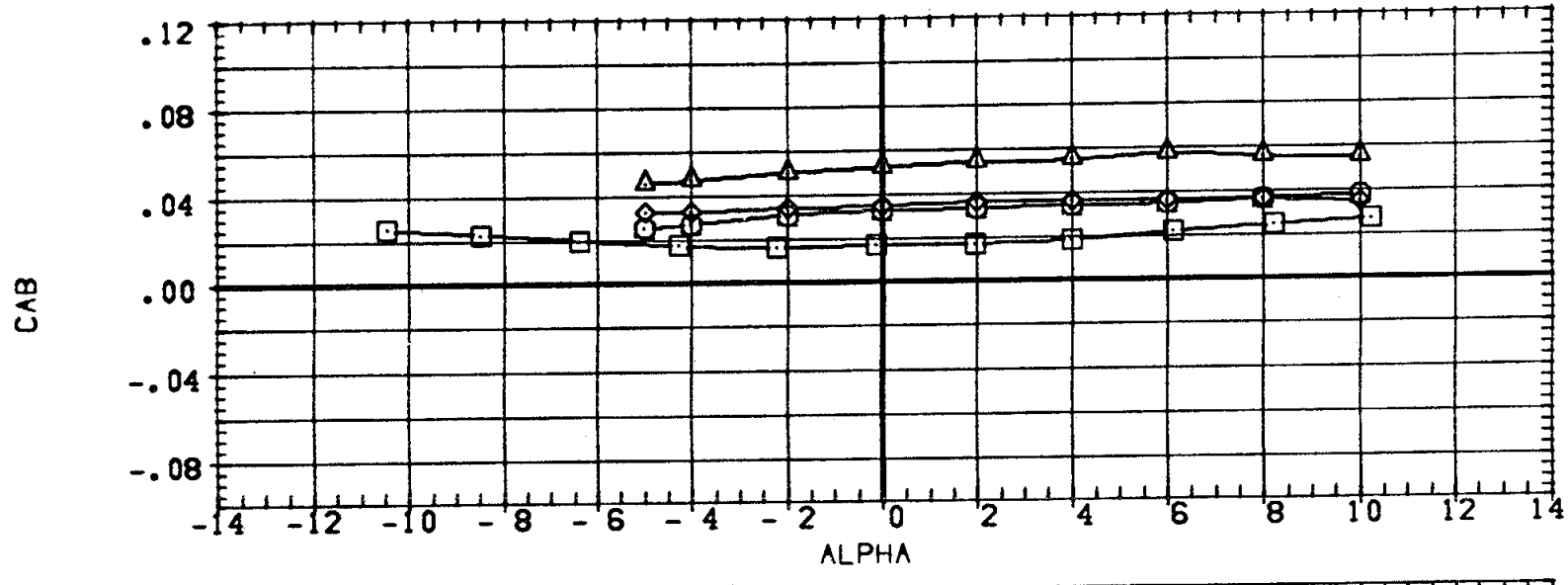


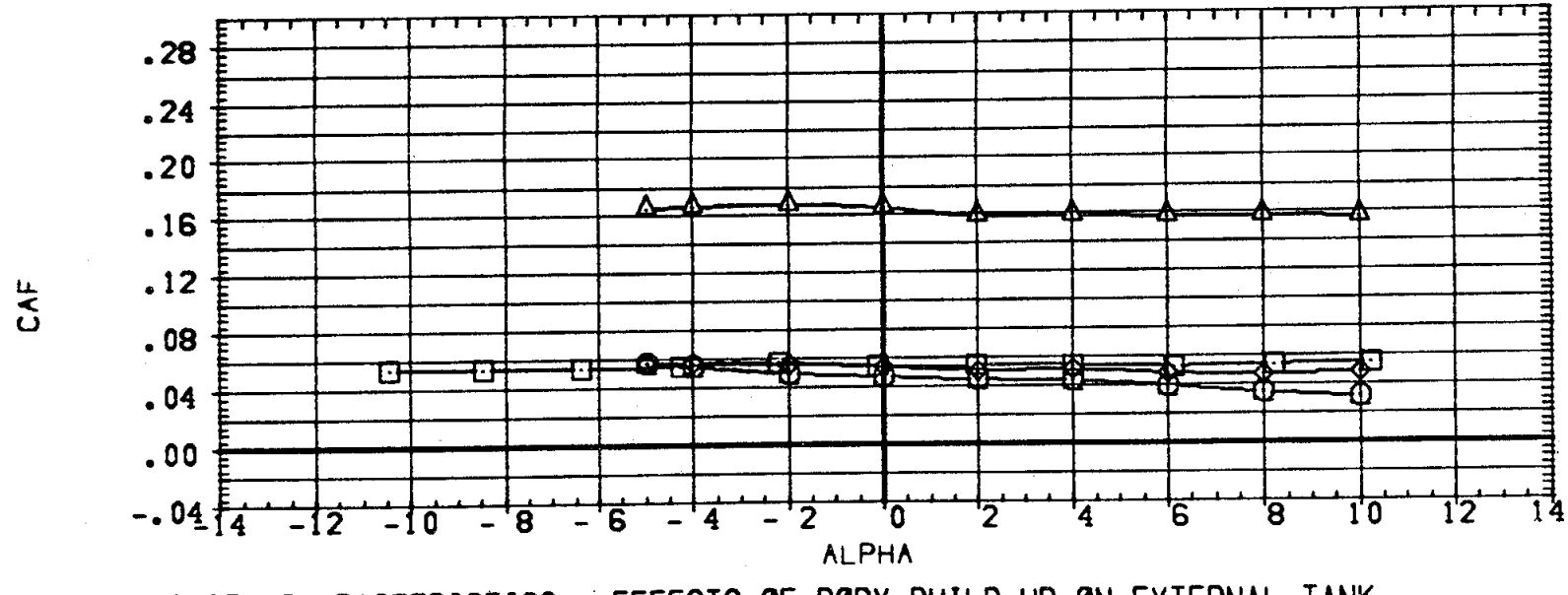
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)		MSFC S45 (IA1) MOD ATP LV-(TS)/(O1)	.000	.120	10.000	
(A72106)		MSFC S45 (IA1) MOD ATP LV-(TS)(S1)/(O1)	.000	.120	10.000	.000
(A72115)		MSFC S45 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	.000	.120	10.000	.000
(A72601)		MSFC S45 (IA1) NAR ATP BL LV-(TS)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





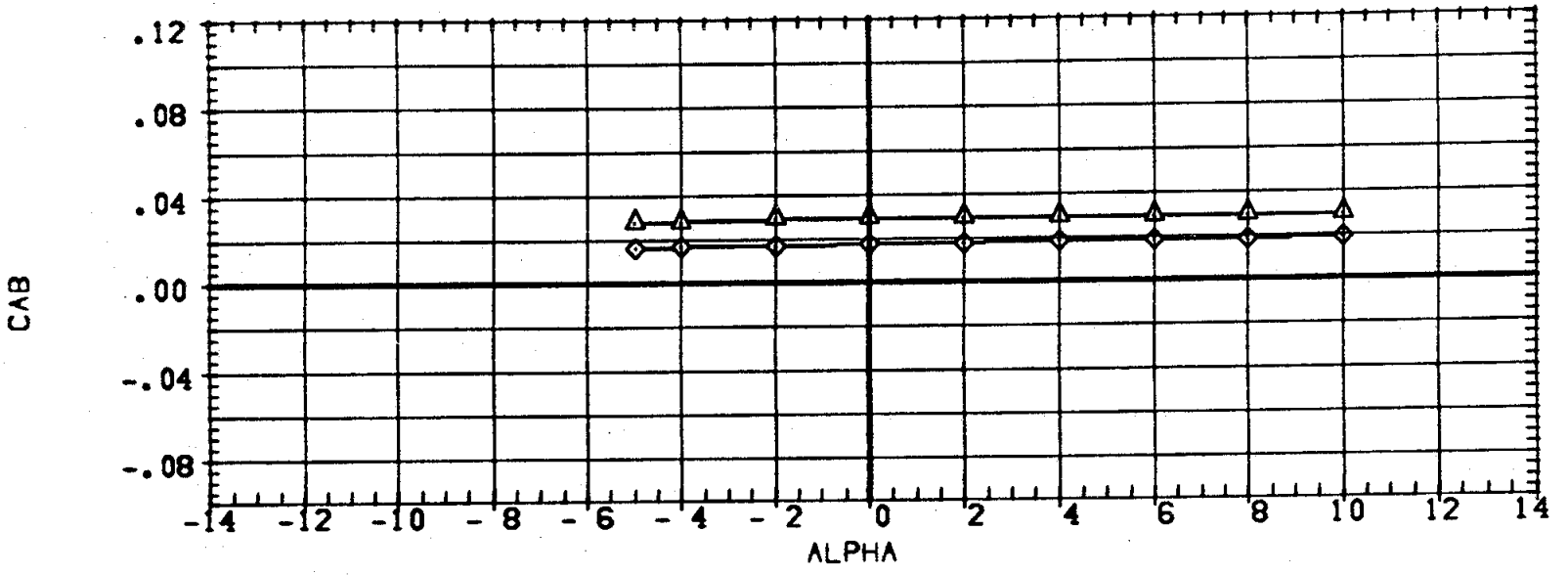
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

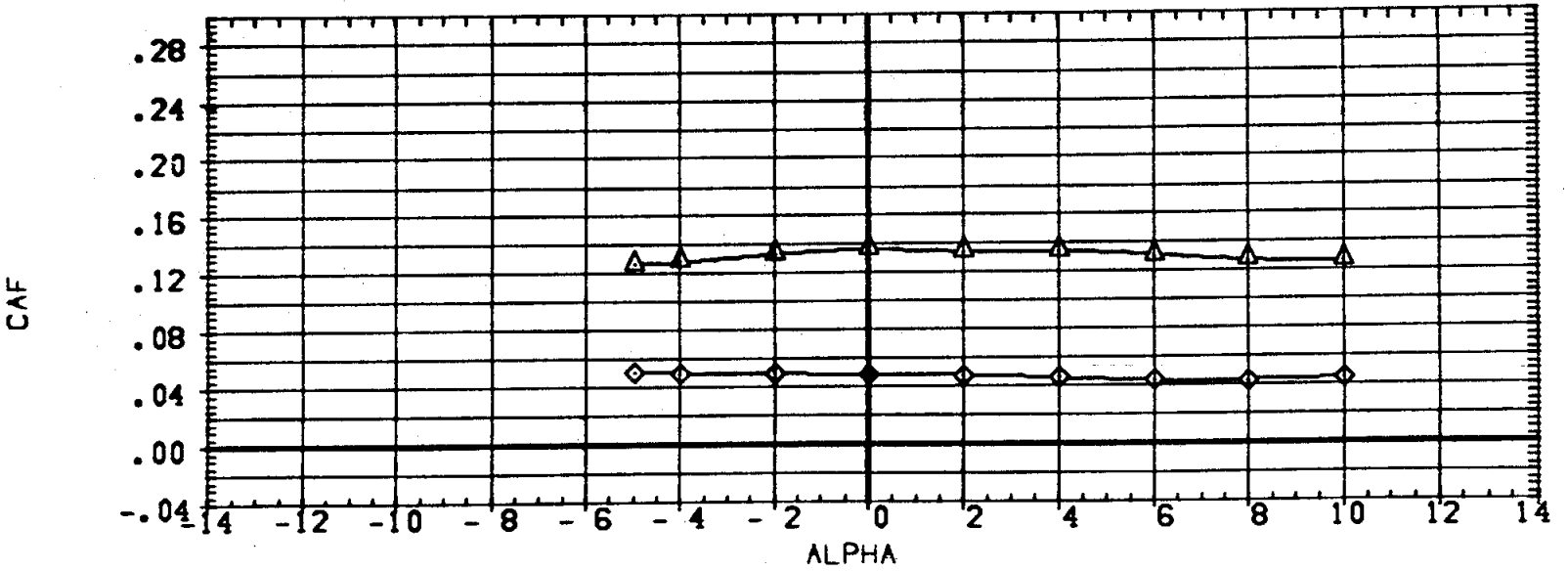
(G)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)		DATA NOT AVAILABLE				
(A72106)		MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	.000	.120	10.000	
(A72115)		MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	.000	.120	10.000	.000
(A72701)		DATA NOT AVAILABLE	.000	.120	10.000	.000
(A72601)		DATA NOT AVAILABLE				.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





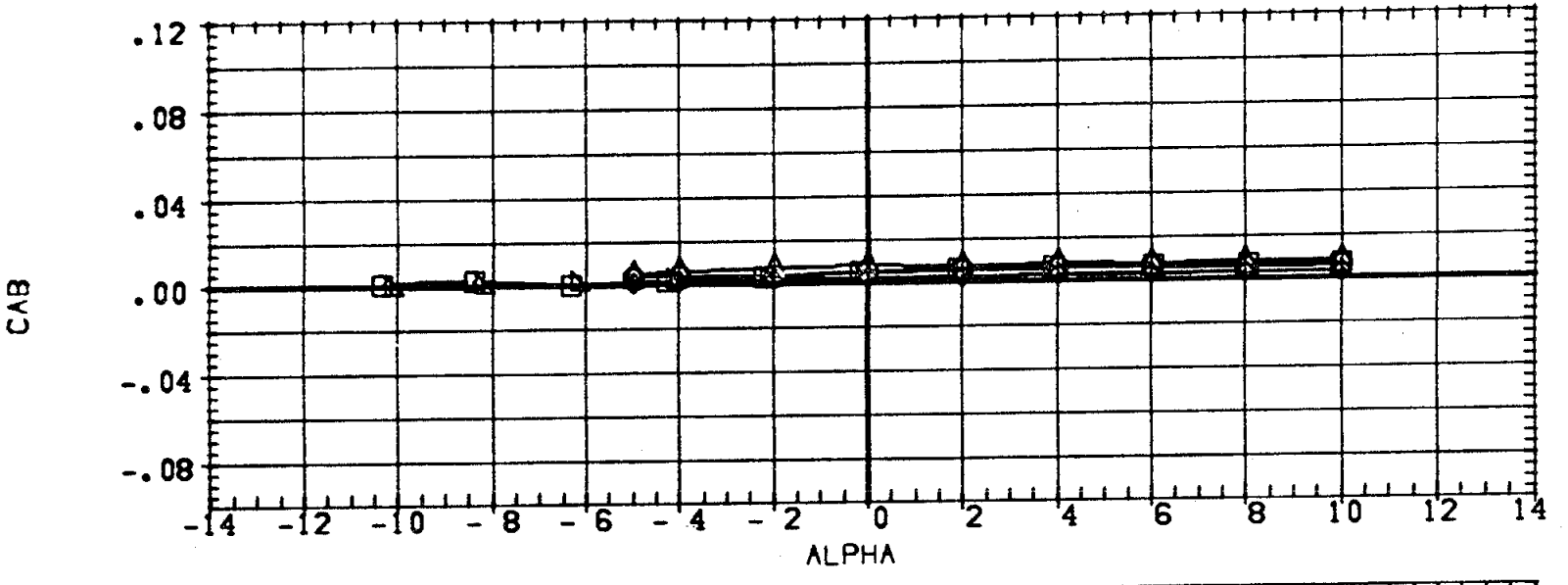
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

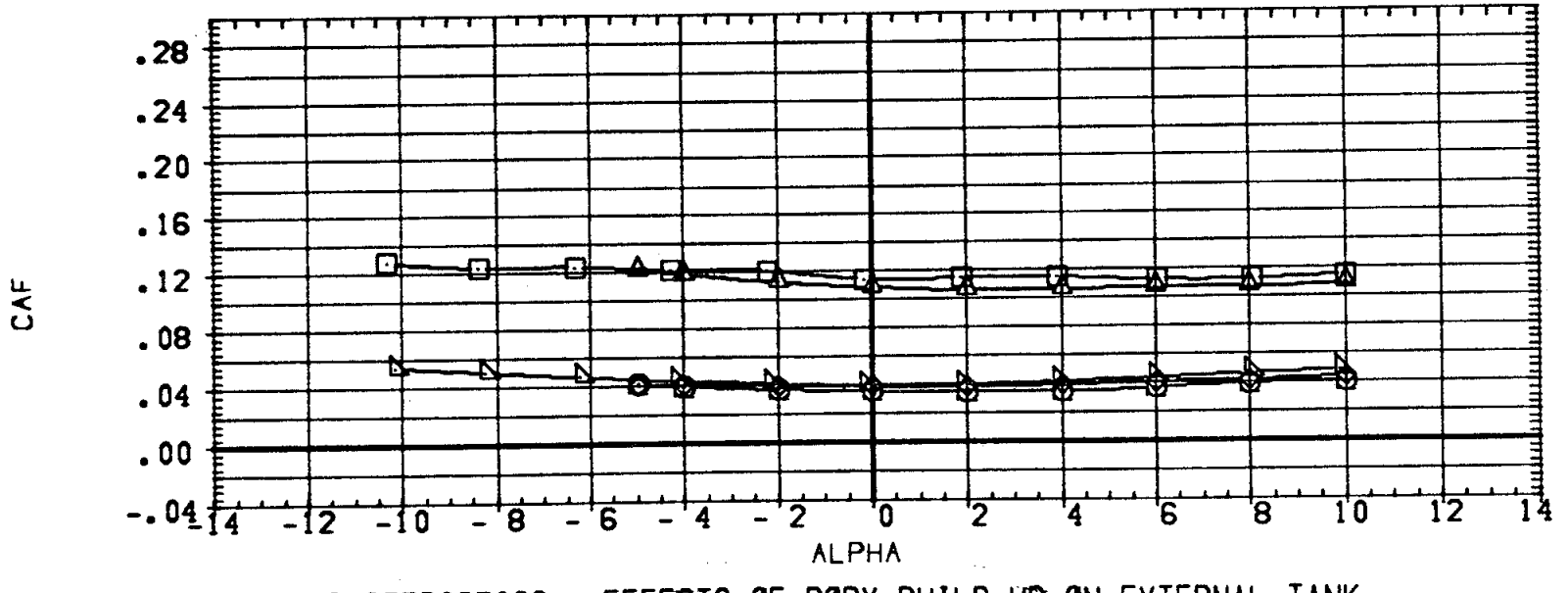
(H)MACH = 2.99

DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72101)		MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72108)		MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72115)		MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)		MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)		MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	.000
.000	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

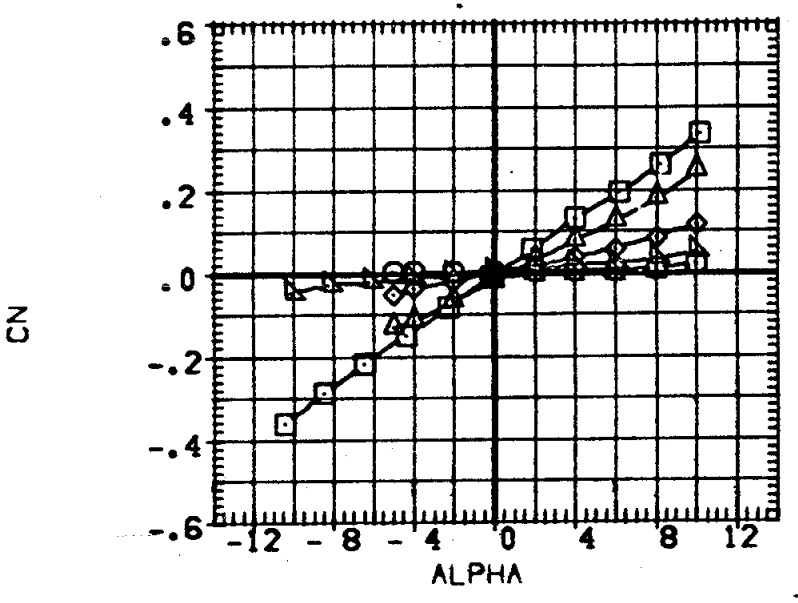
(I)MACH = 4.96

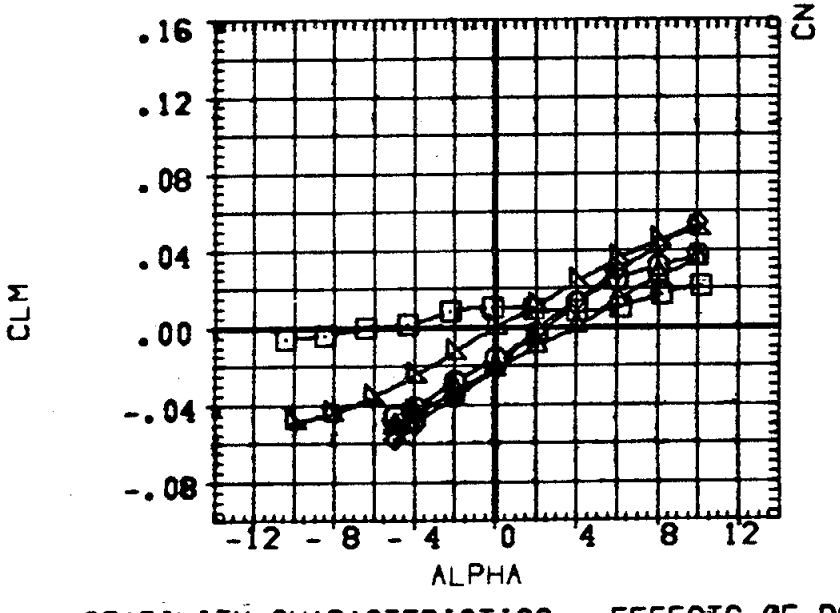
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72109)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)

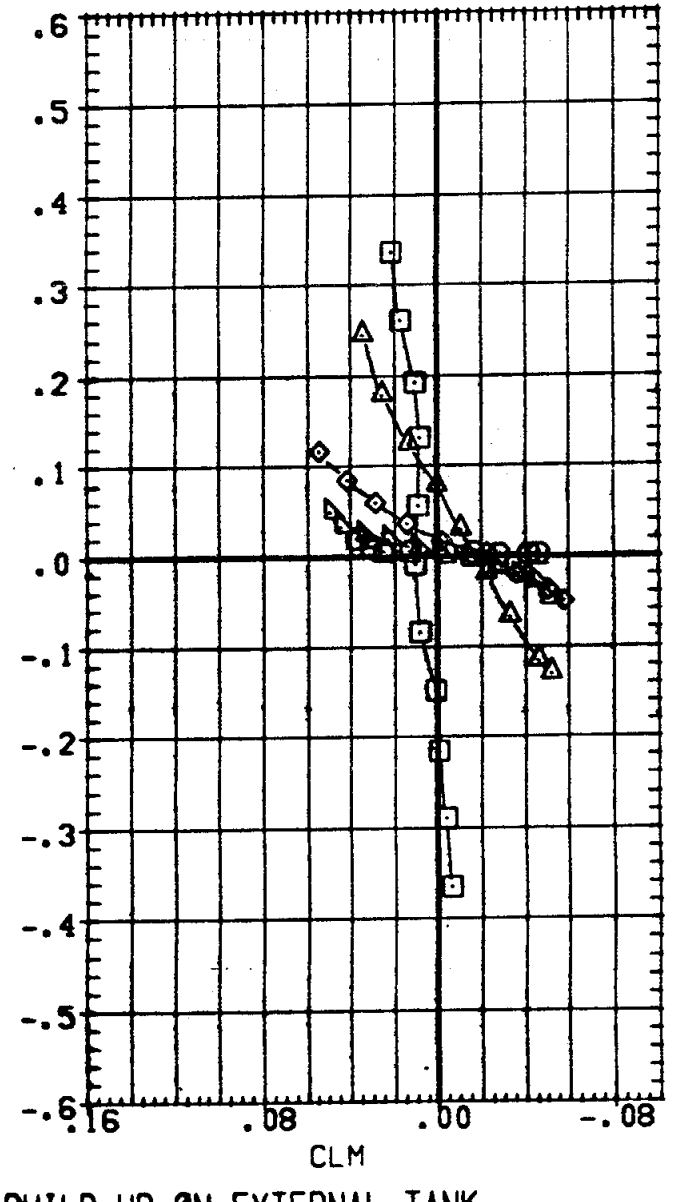
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

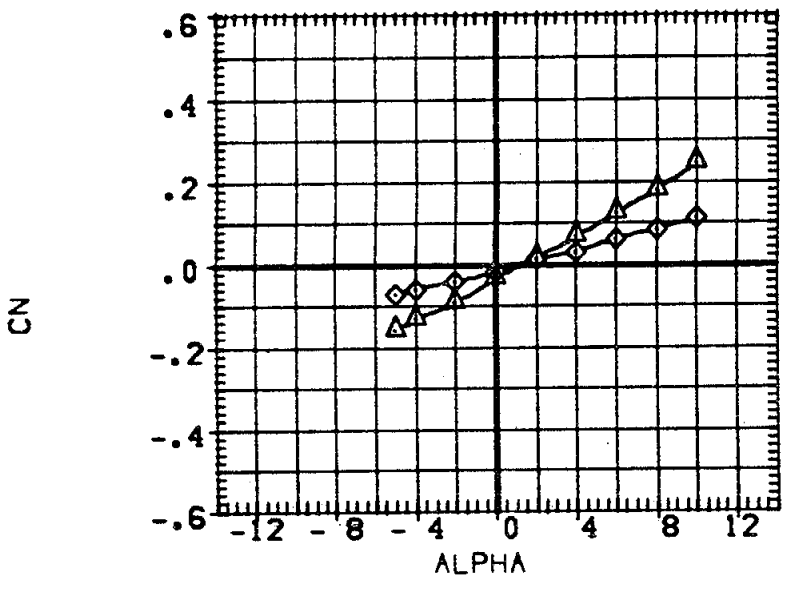
(A)MACH = .60

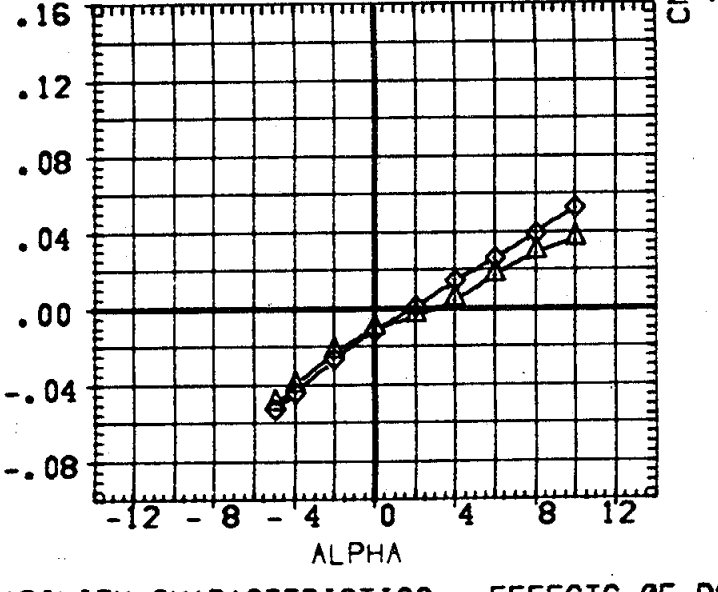
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)		DATA NOT AVAILABLE
(A72109)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)		DATA NOT AVAILABLE
(A72601)		DATA NOT AVAILABLE

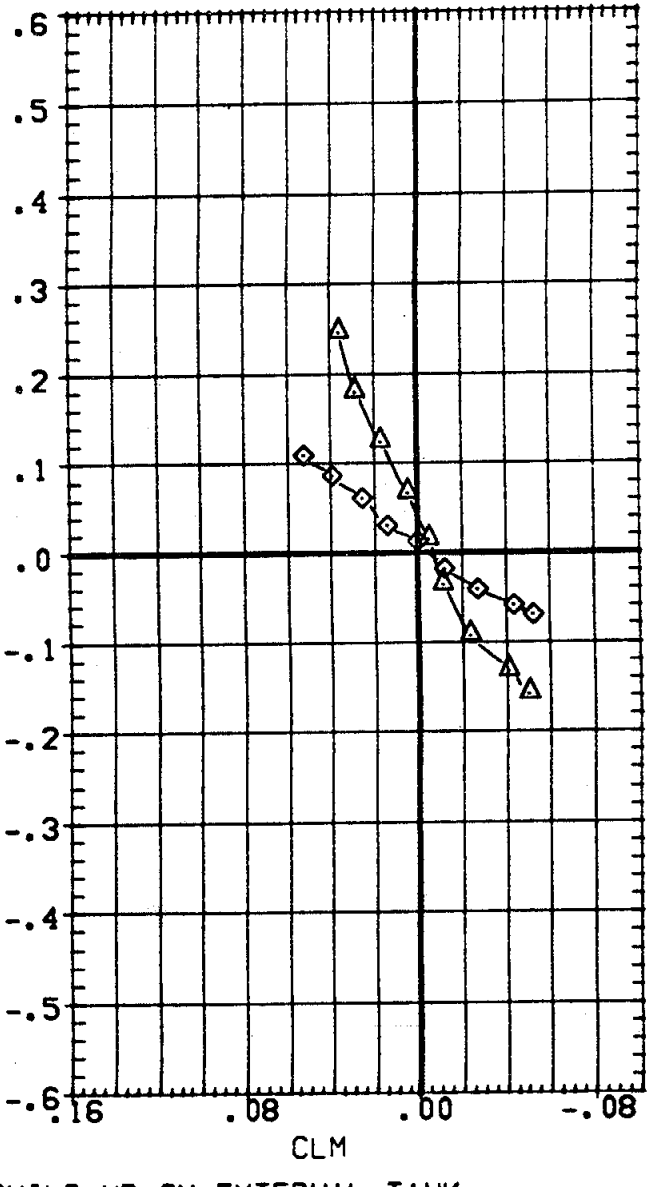
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

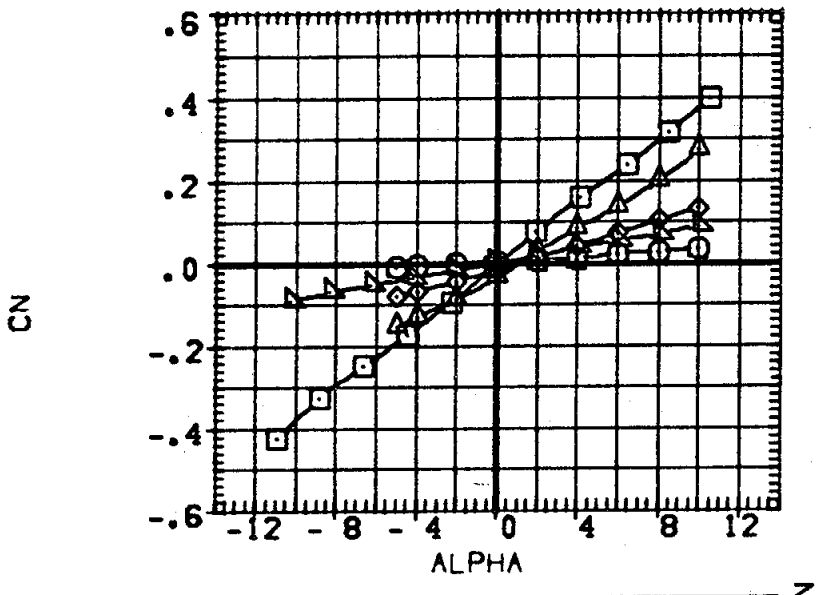
(B)MACH = .80

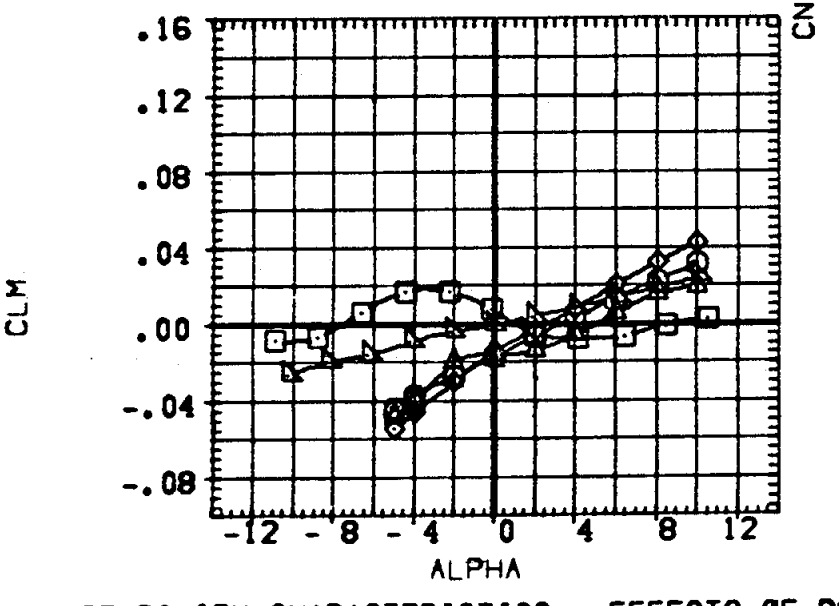
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(O1)
(A72109)	△	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC 545 (1A1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC 545 (1A1) NAR ATP BL LV-(T3)

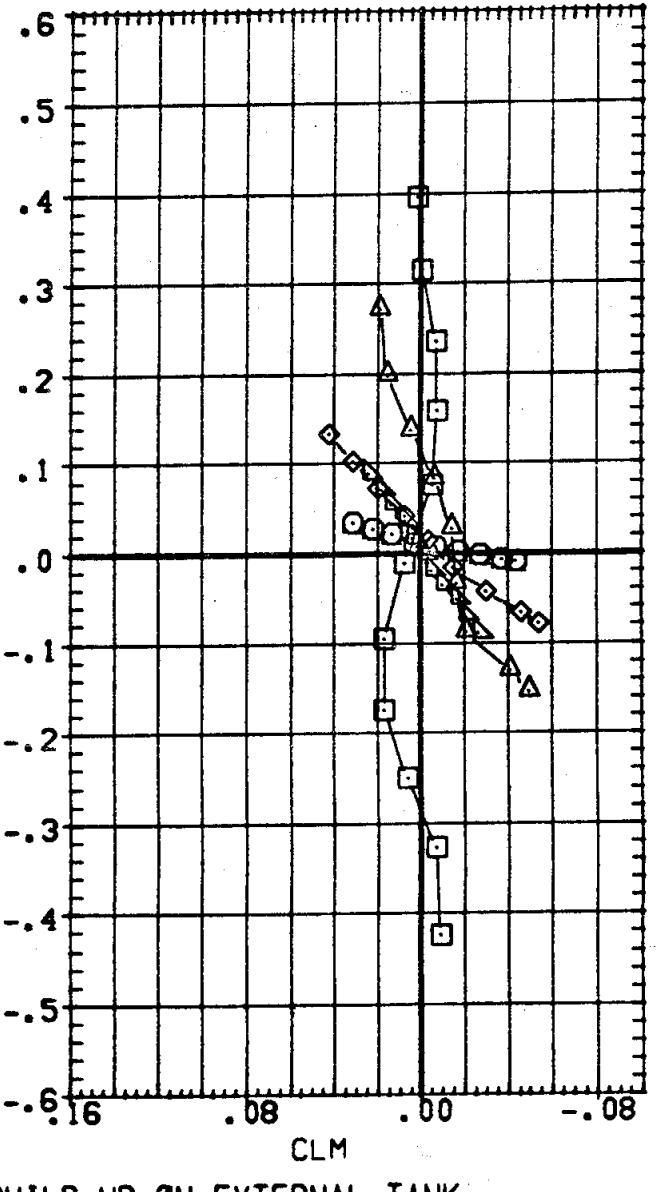
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







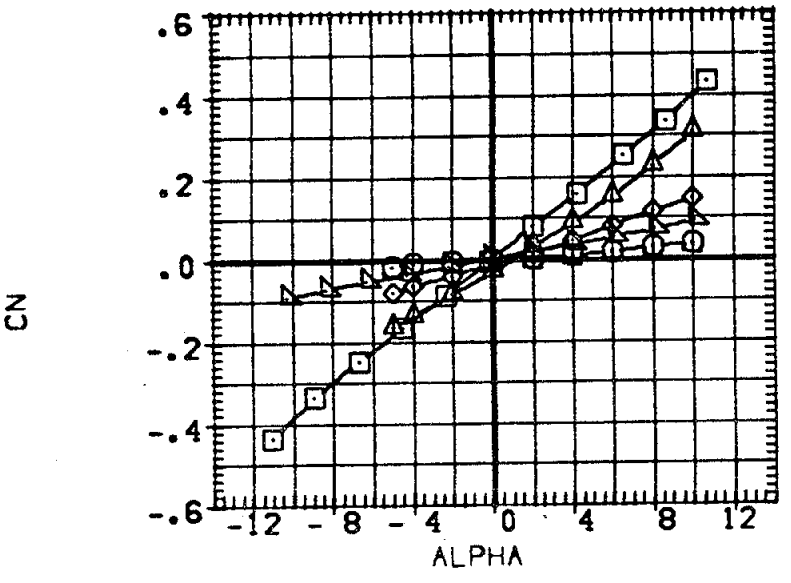
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

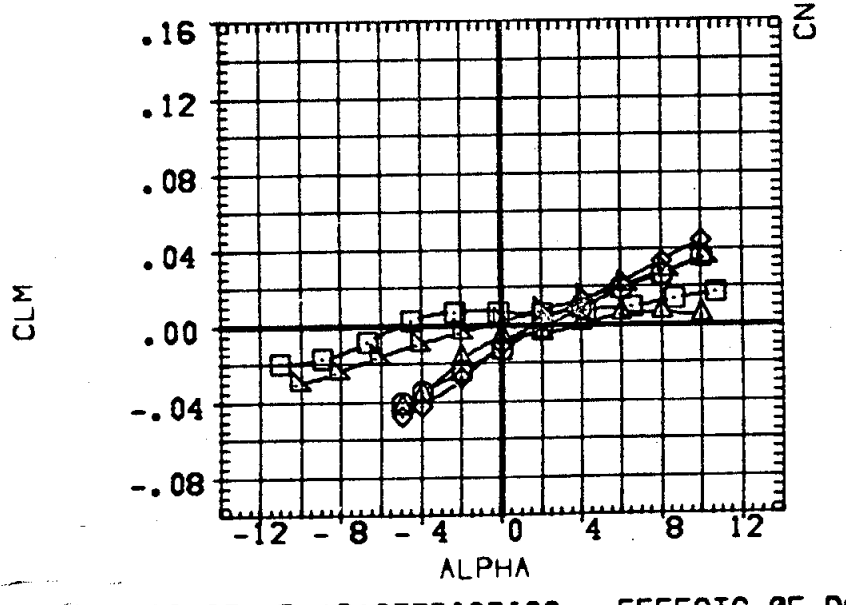
(C)MACH = .90

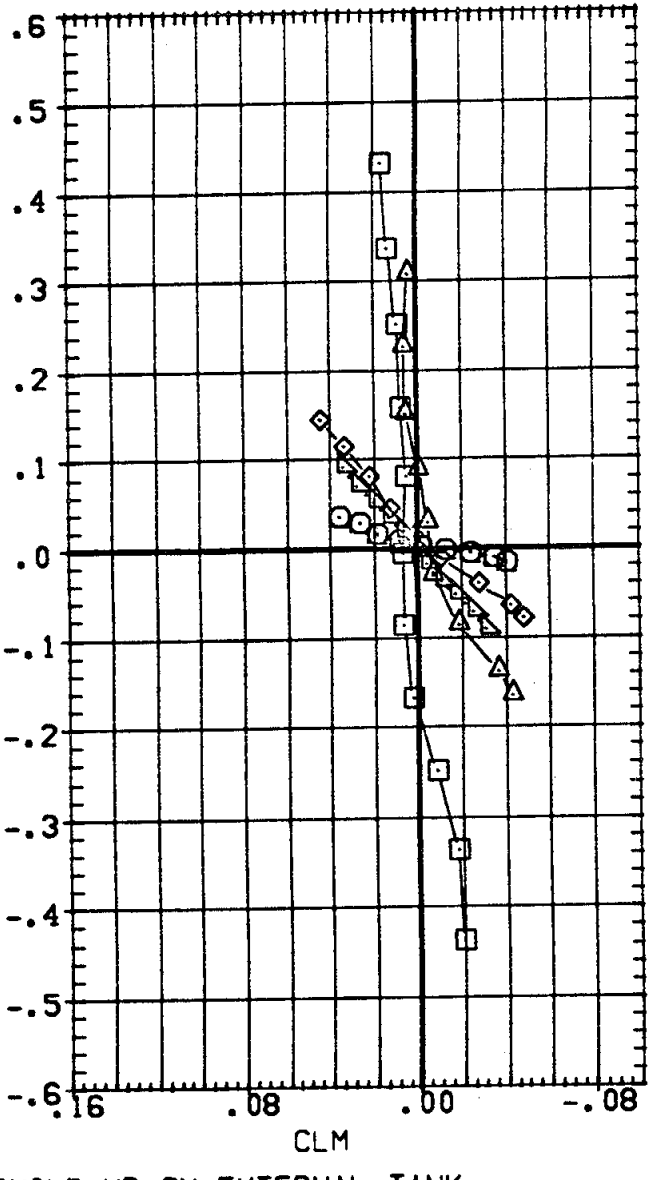
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)		MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72109)		MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72116)		MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)		MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)		MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

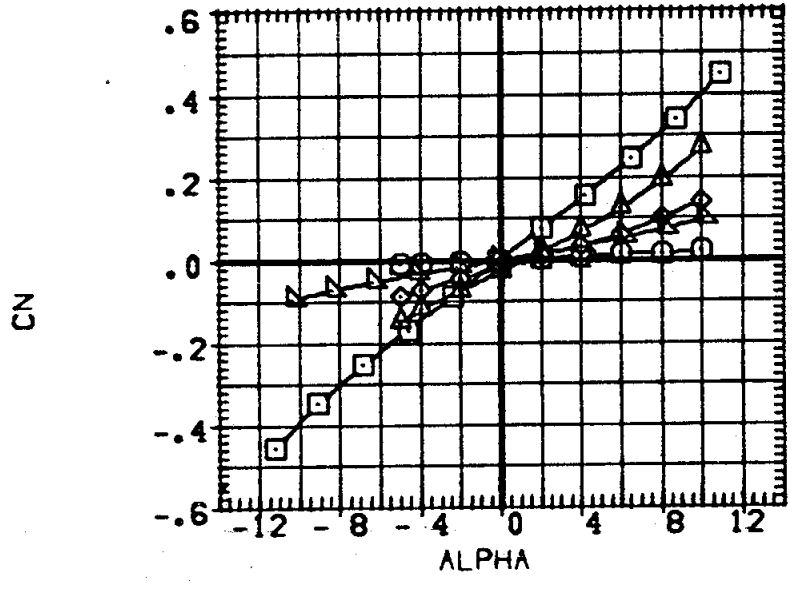
(D)MACH = .99

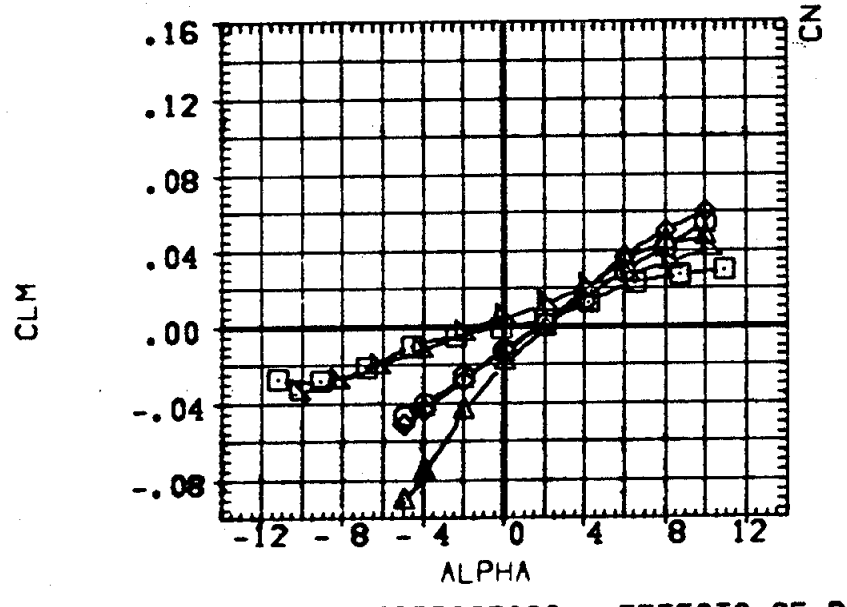
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72109)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(B1)/(O1)
(A72116)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)

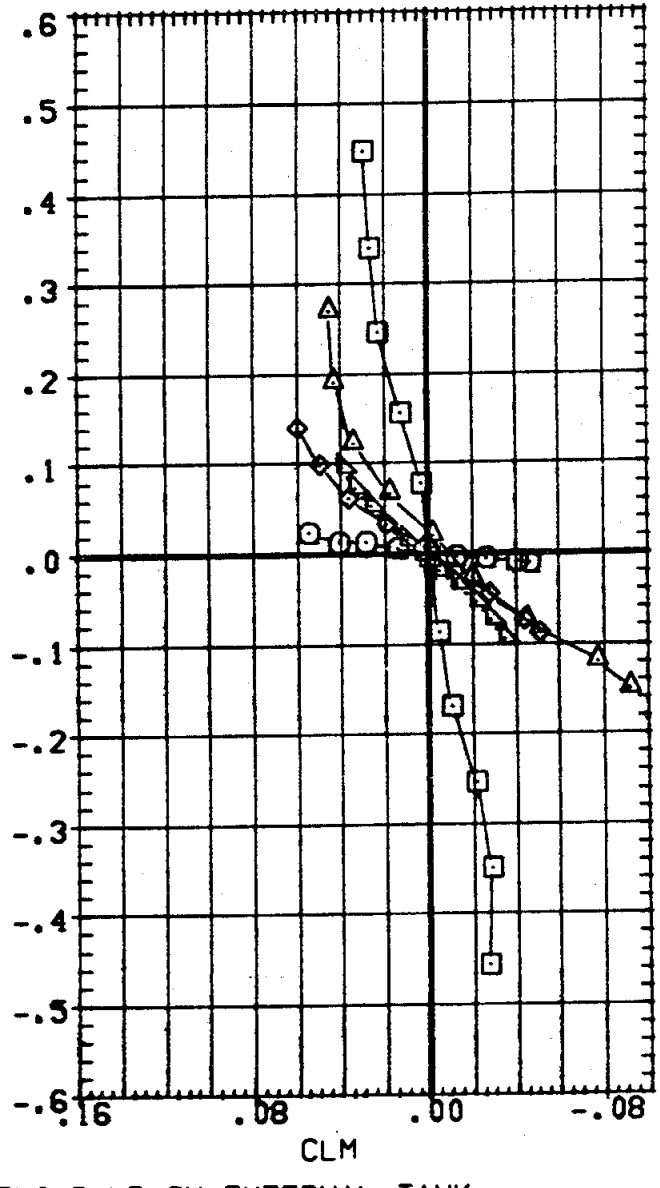
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

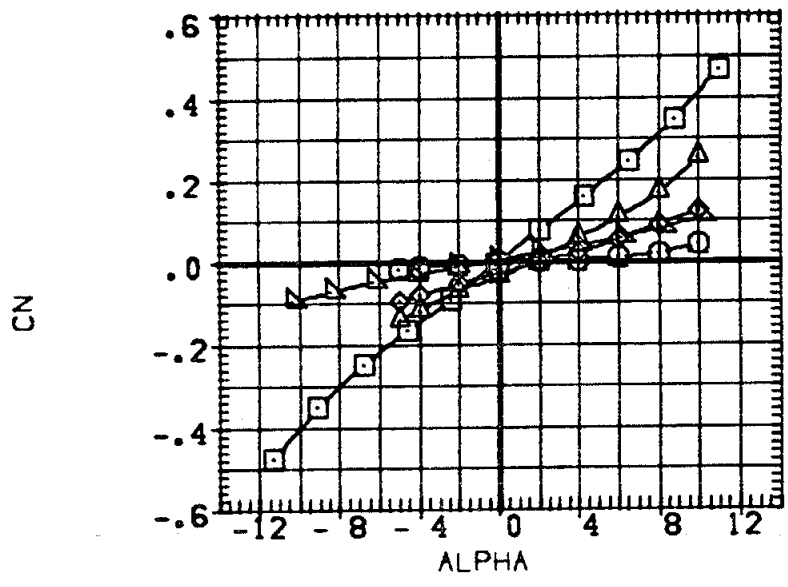
(E)MACH = 1.20

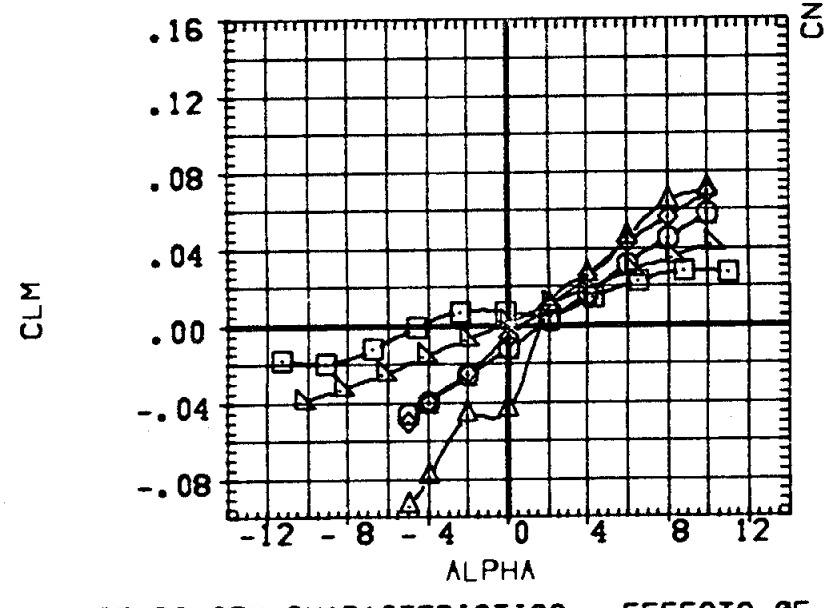
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72109)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)

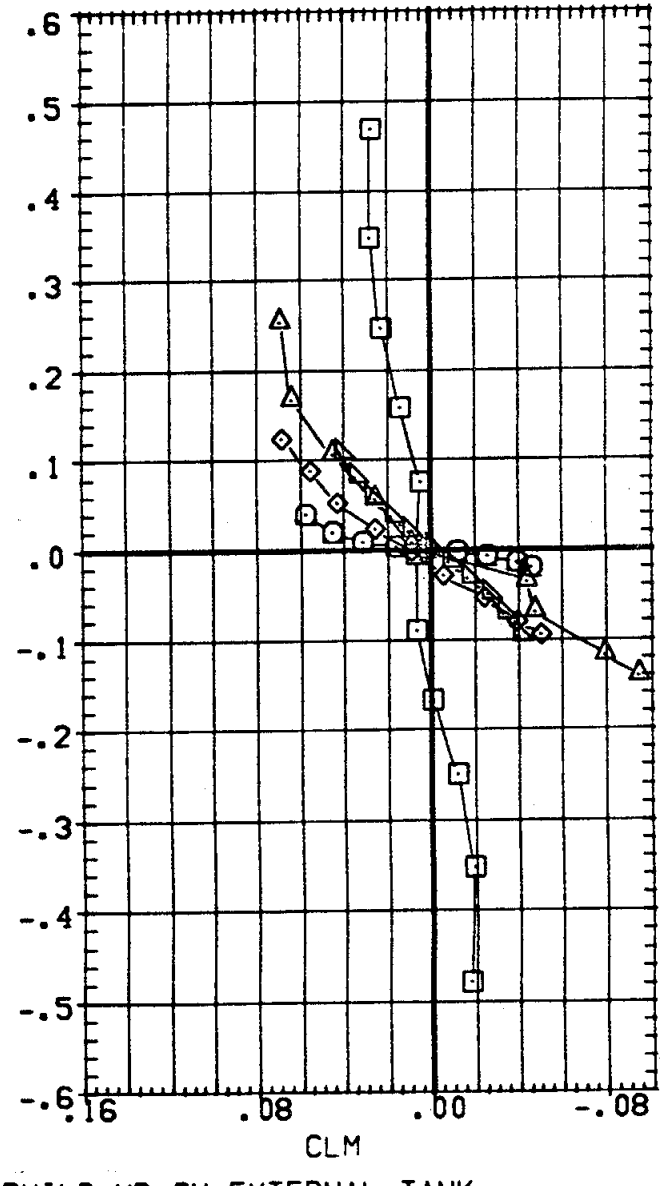
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







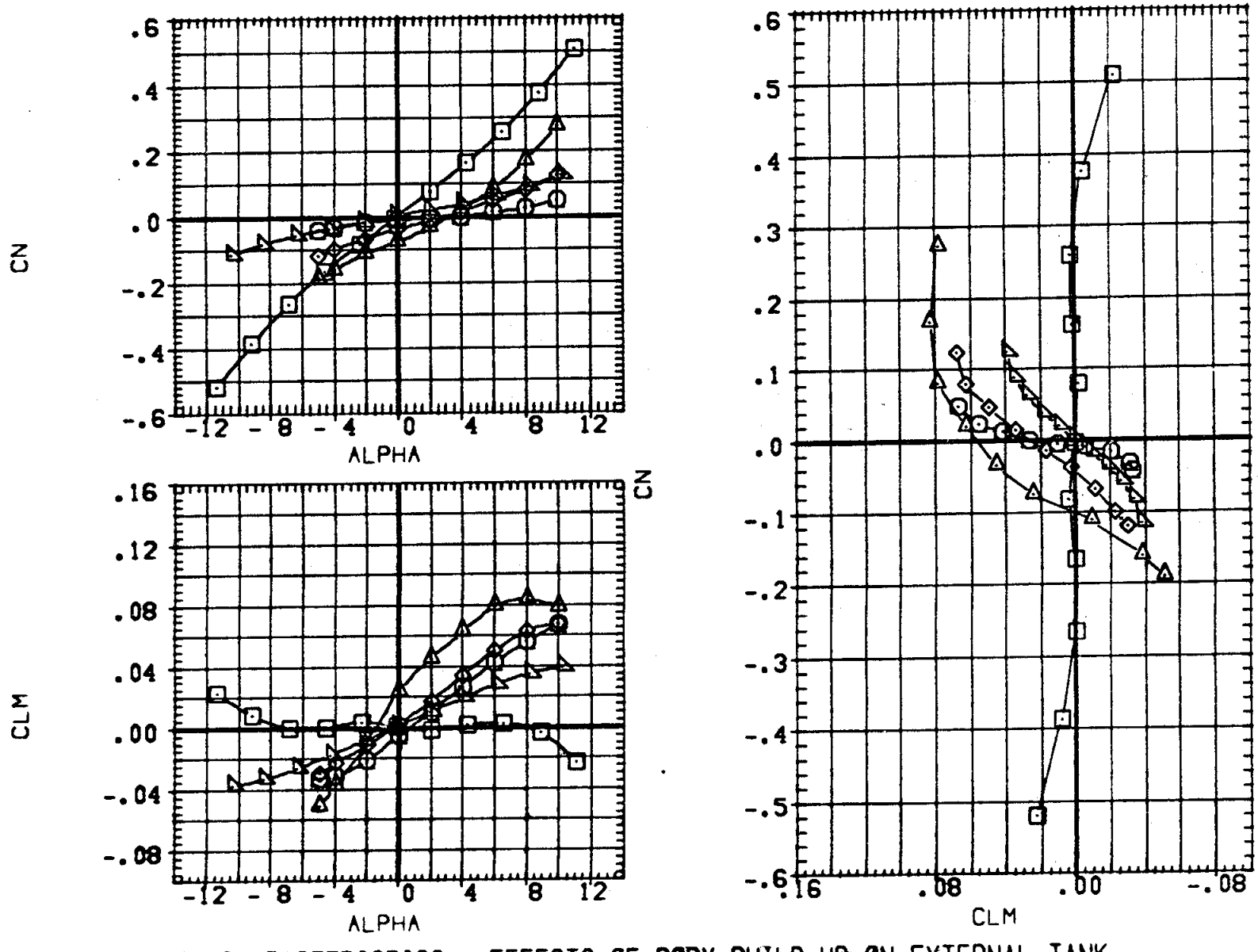
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC S45 (IA1) MOD ATP LV-(T3)/(O1)
(A72109)	△	MSFC S45 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	◇	MSFC S45 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC S45 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC S45 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

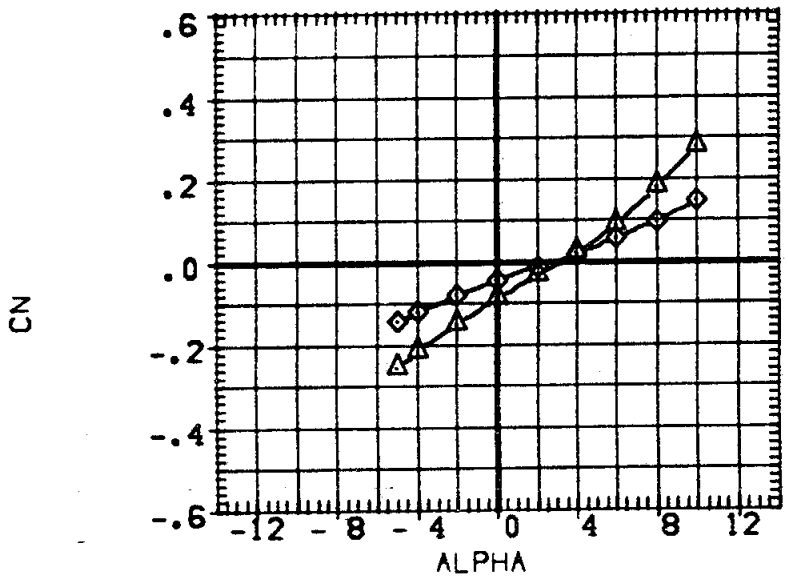
(G)MACH = 1.95

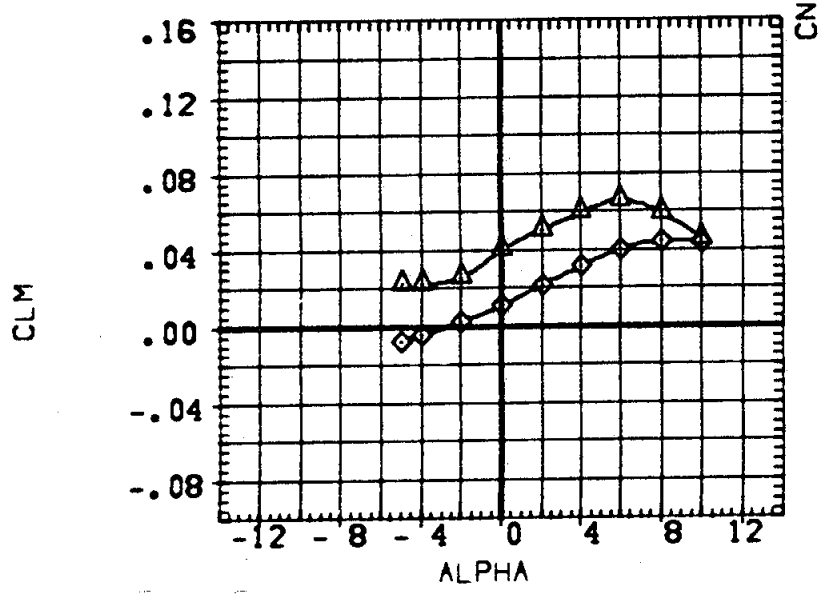
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	DATA NOT AVAILABLE
(A72109)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	DATA NOT AVAILABLE
(A72601)	▽	DATA NOT AVAILABLE

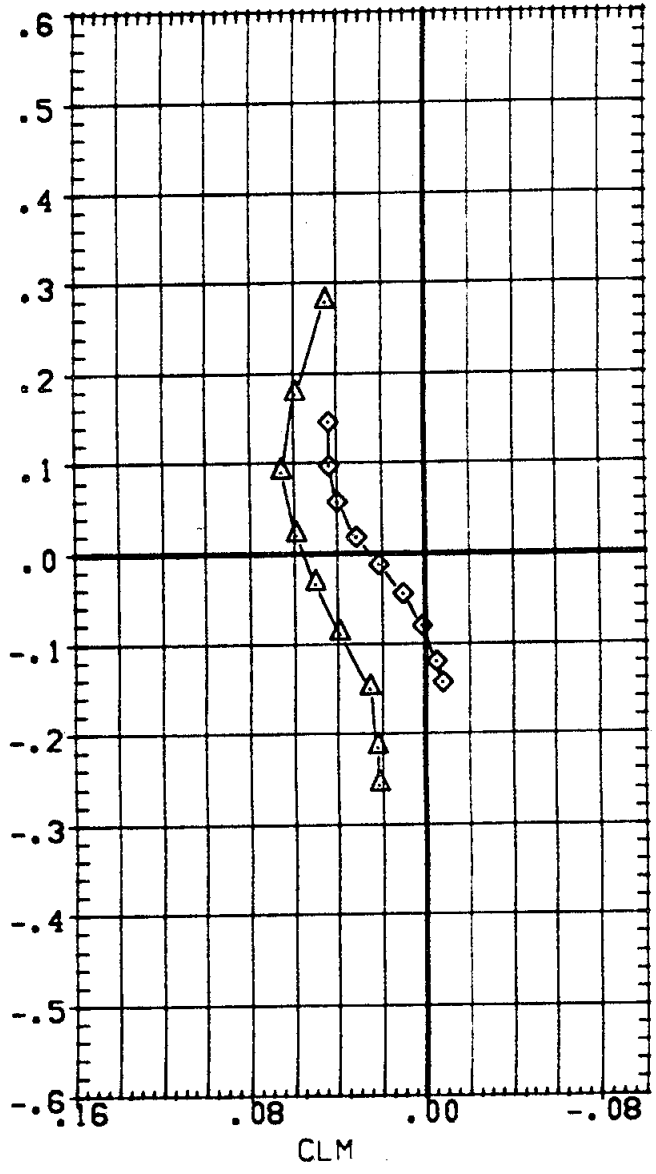
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

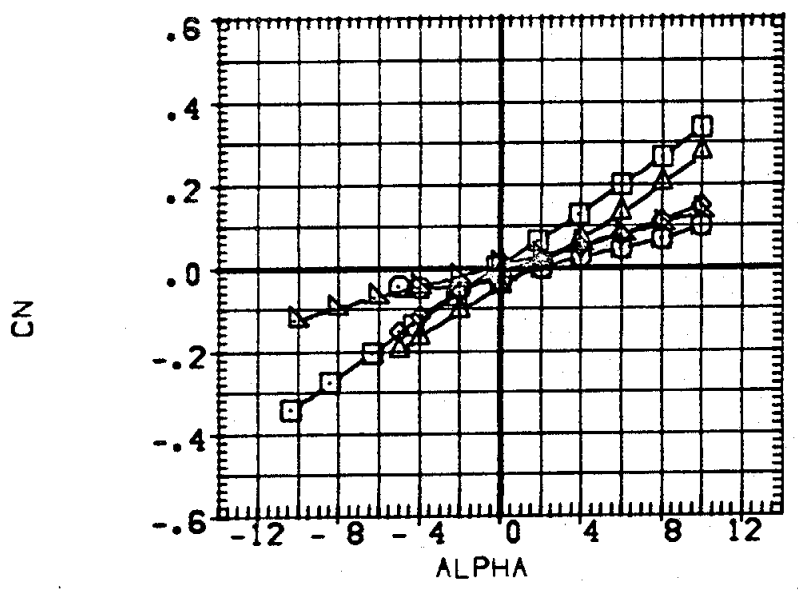
(H)MACH = 2.99

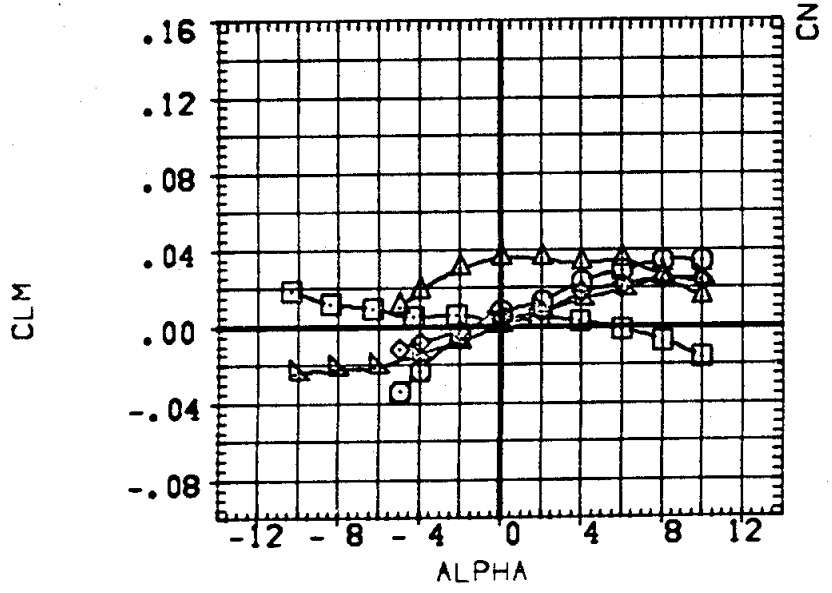
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(O1)
(A72109)	△	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC 545 (1A1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC 545 (1A1) NAR ATP BL LV-(T3)

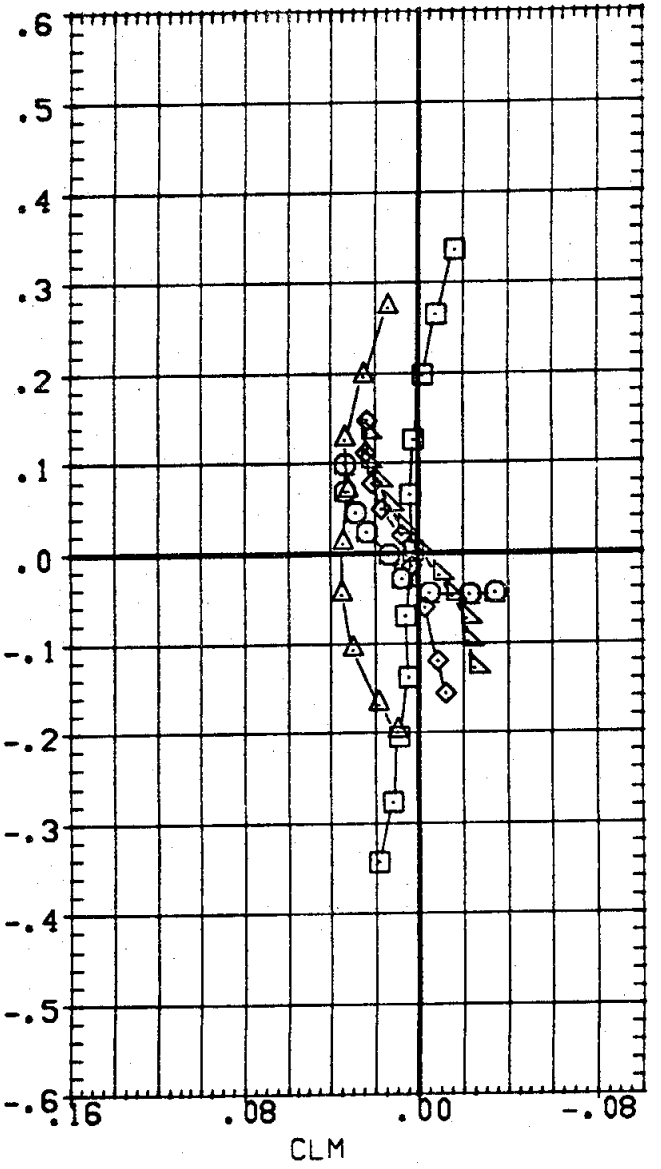
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMAT(

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







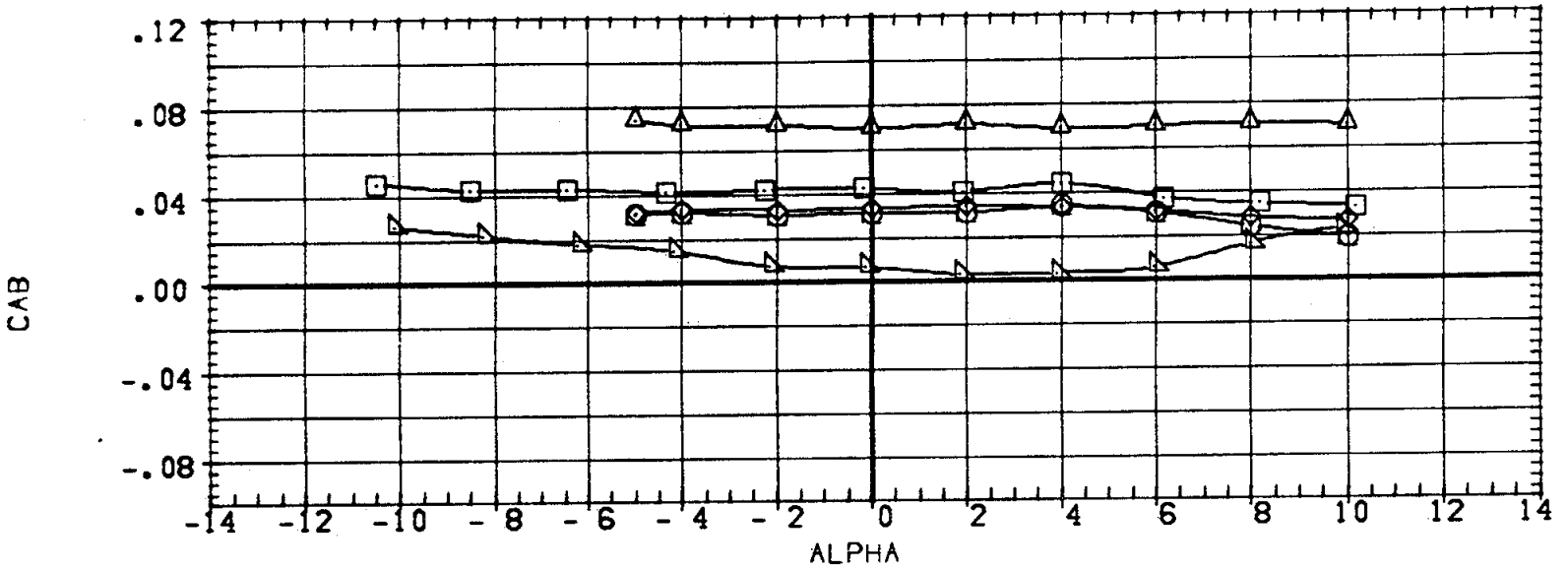
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

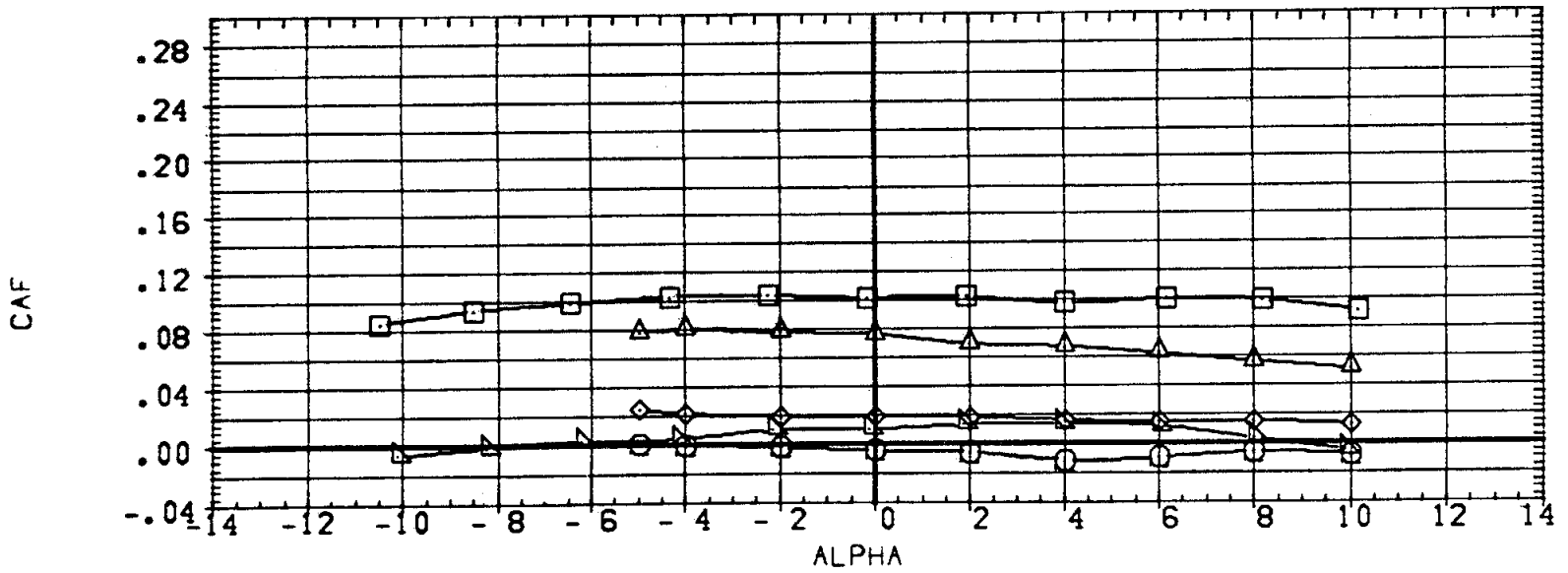
( )MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)		MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72109)		MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72116)		MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)		MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)		MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



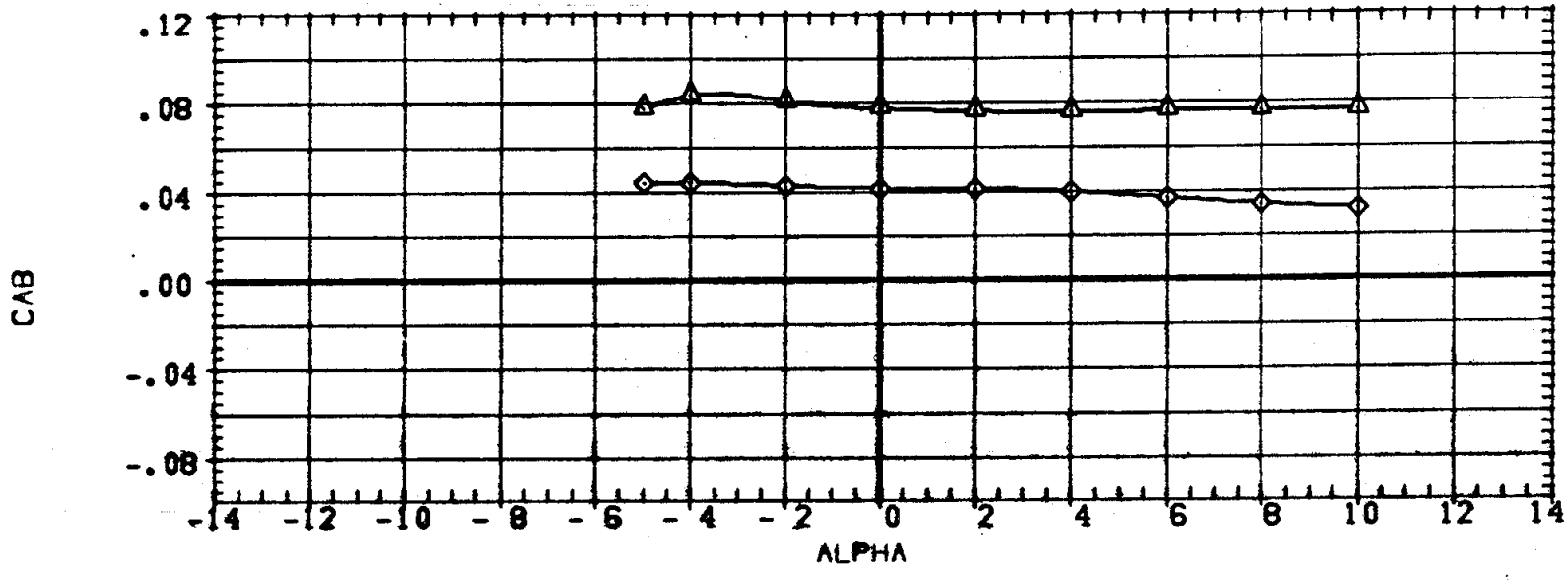


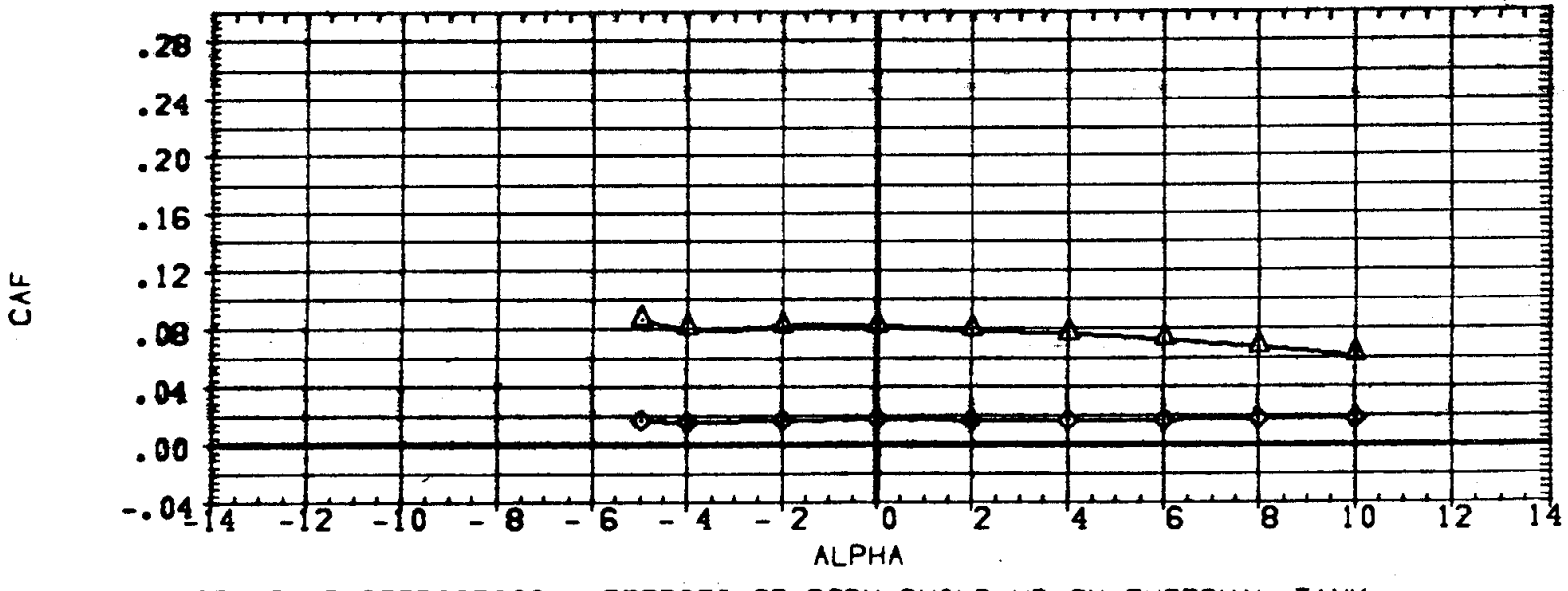
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72102)		DATA NOT AVAILABLE	-1.200	.120	10.000	
(A72109)		MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	-1.200	.120	10.000	.000
(A72116)		MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	-1.200	.120	10.000	.000
(A72701)		DATA NOT AVAILABLE				.000
(A72601)		DATA NOT AVAILABLE				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

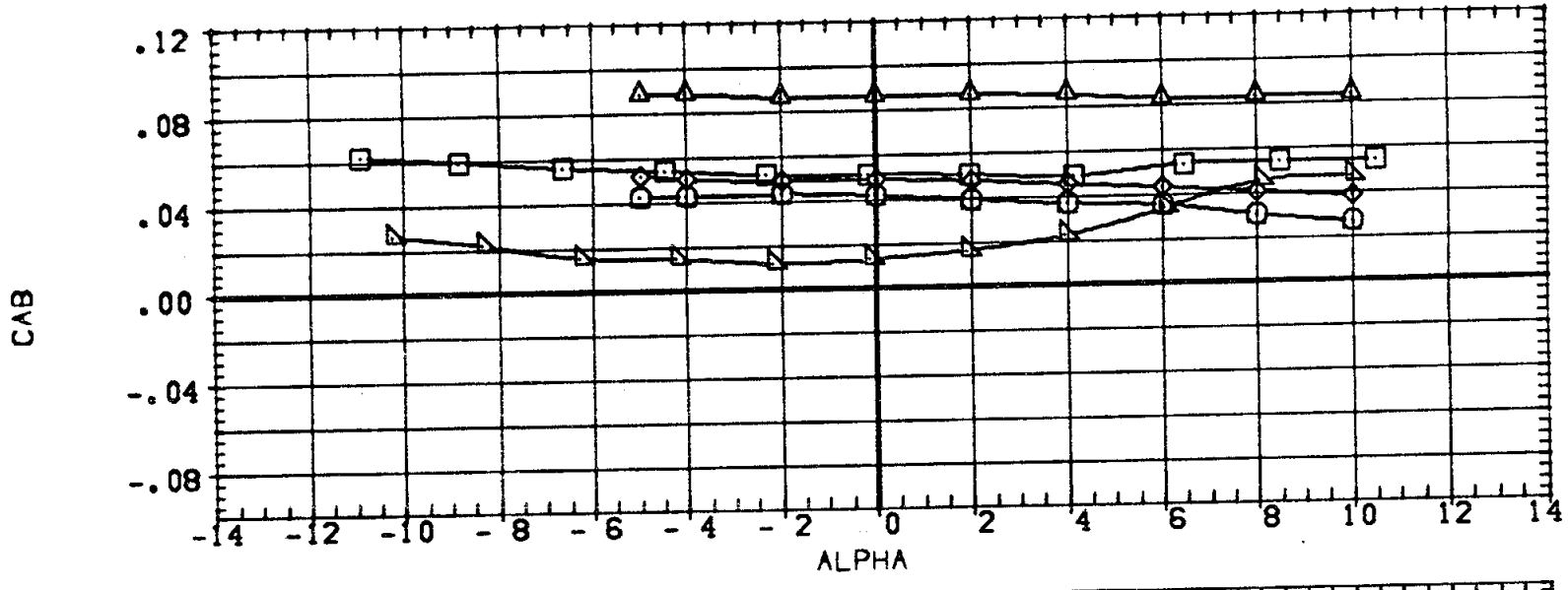
(B)MACH = .80

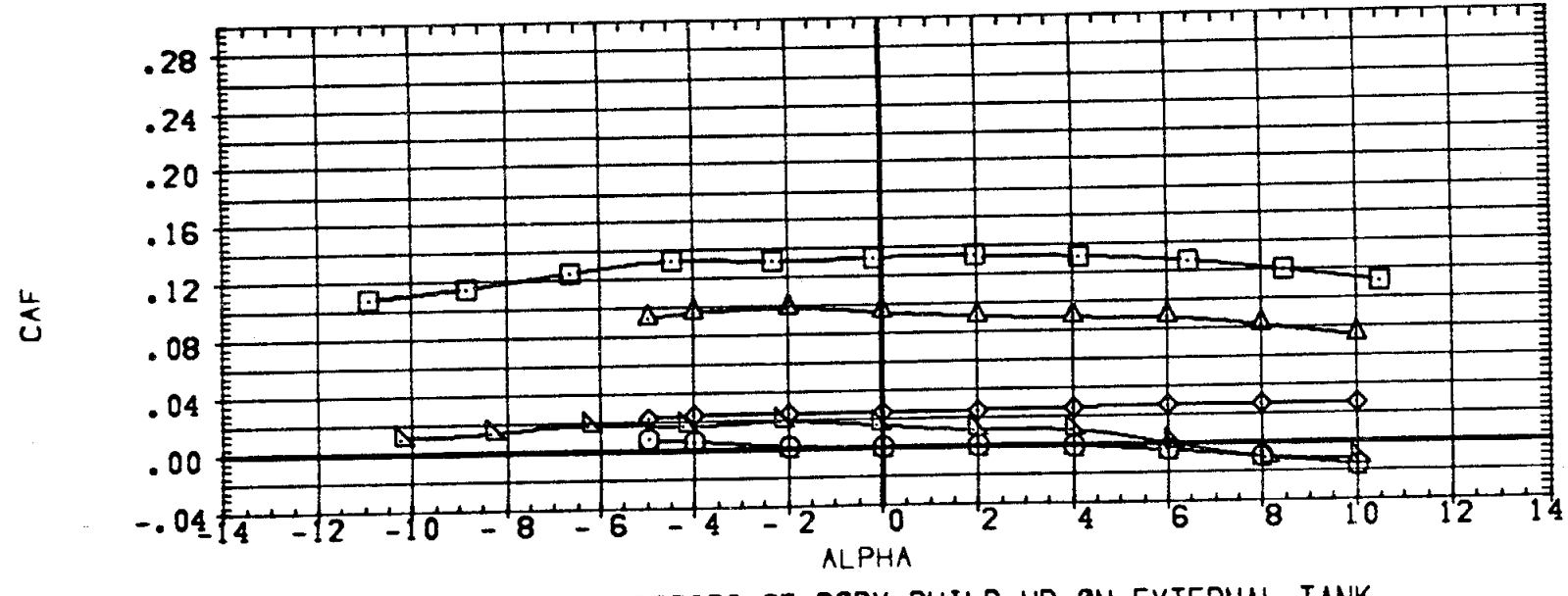
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72109)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72116)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)	⌐	MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





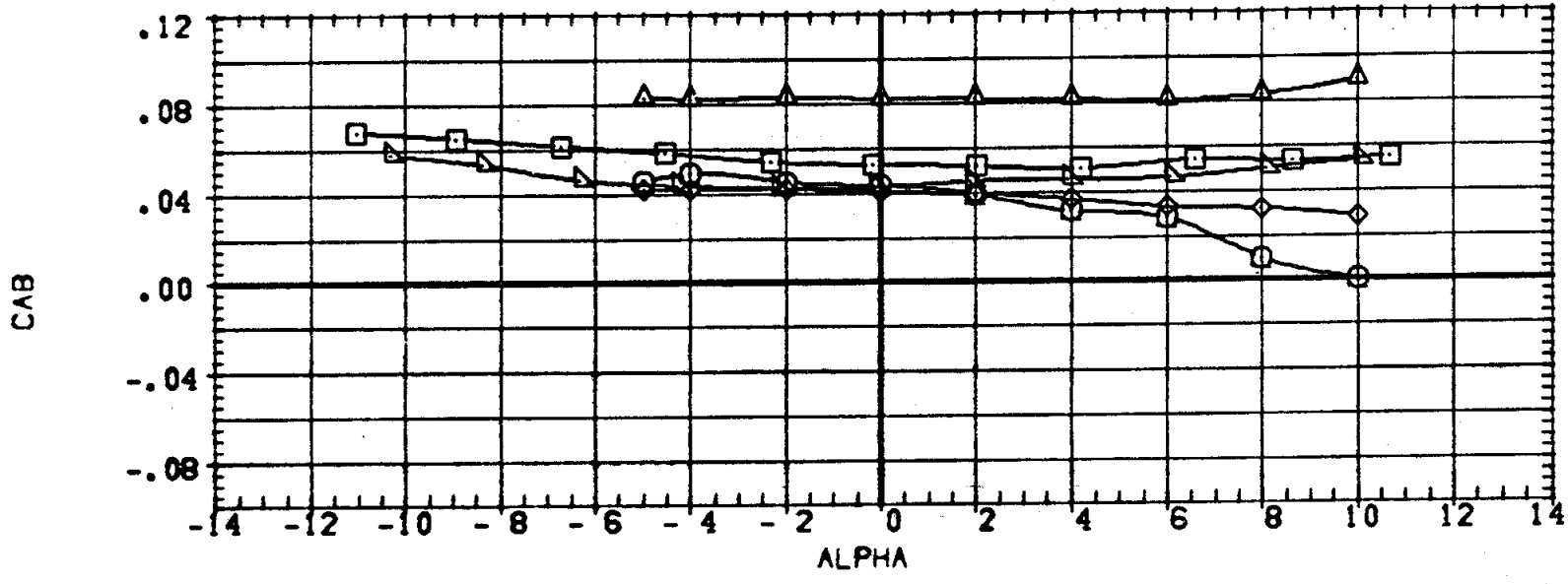
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

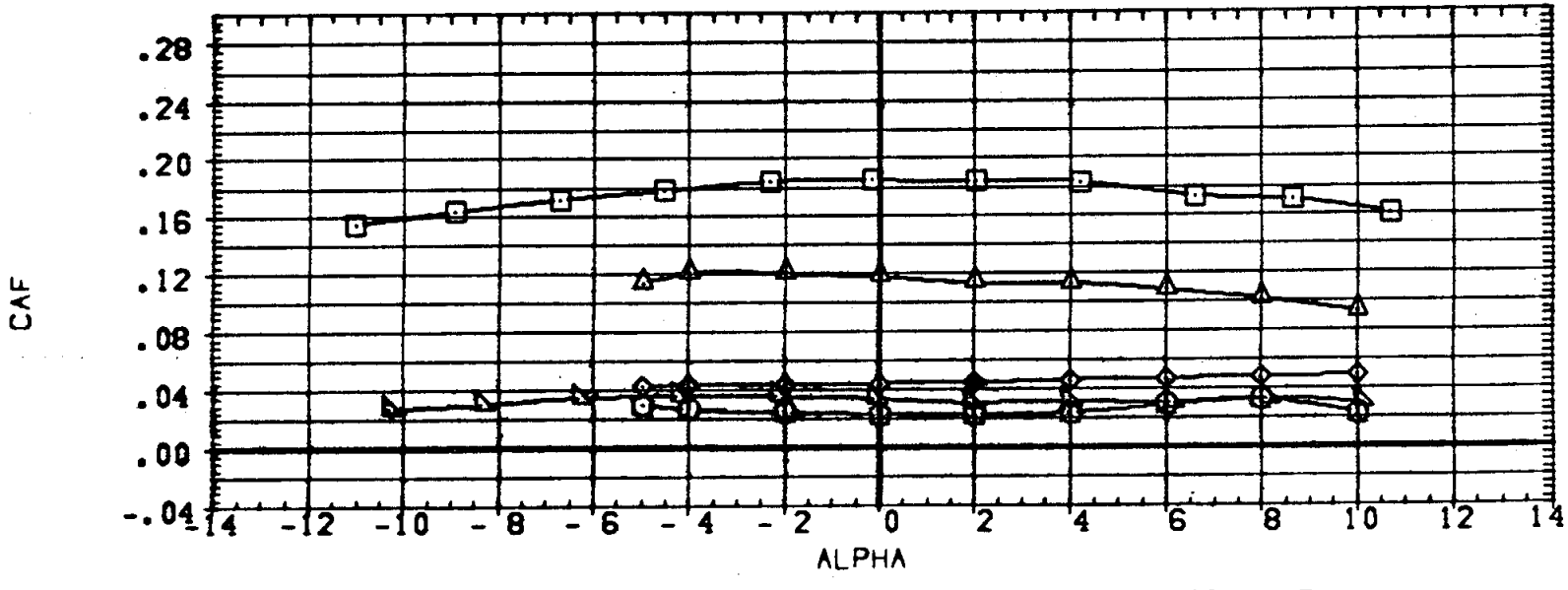
(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72109)	⊠	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

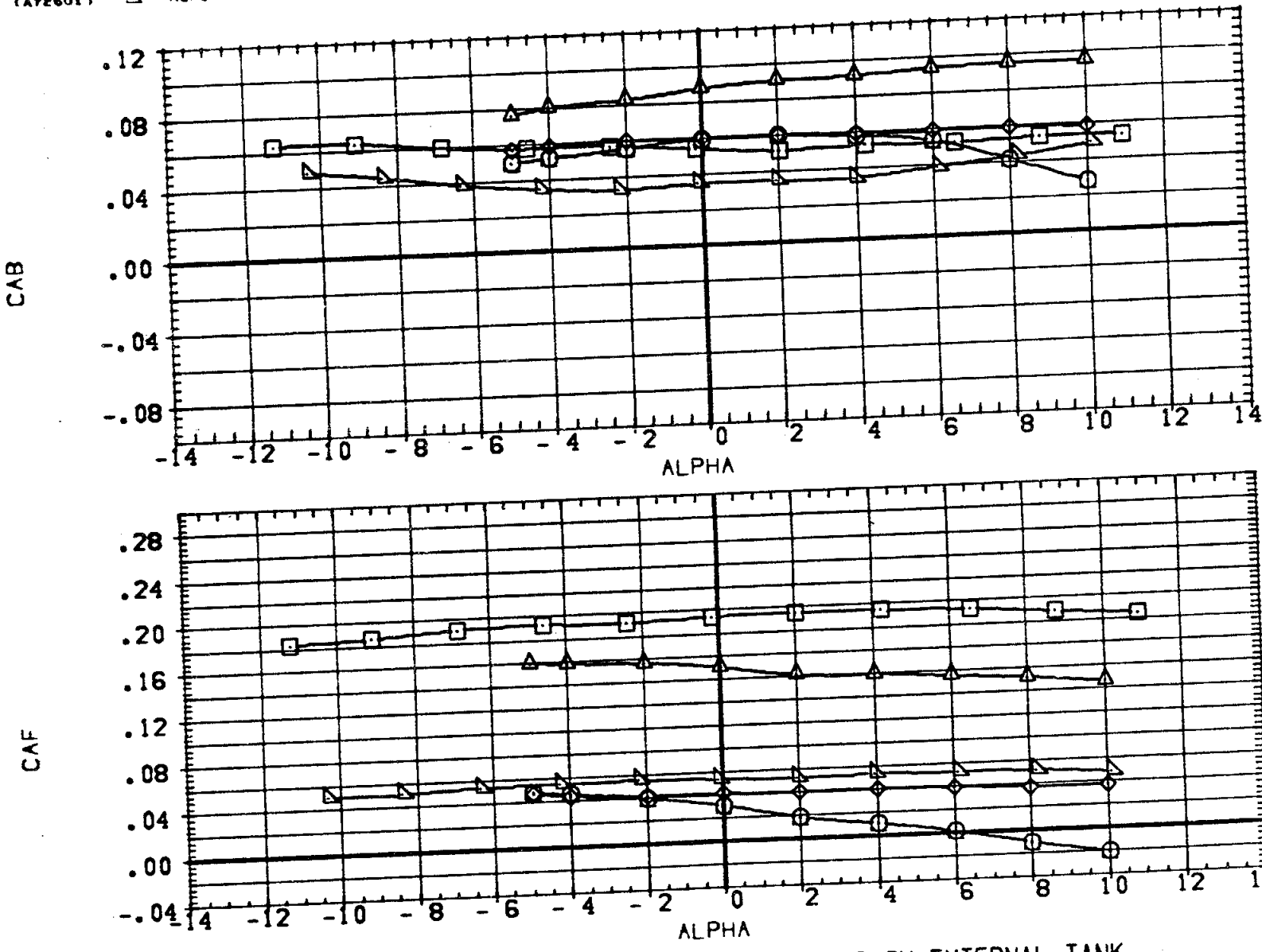
(D)MACH = .99

DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72102)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72109)	▽	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	◇	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

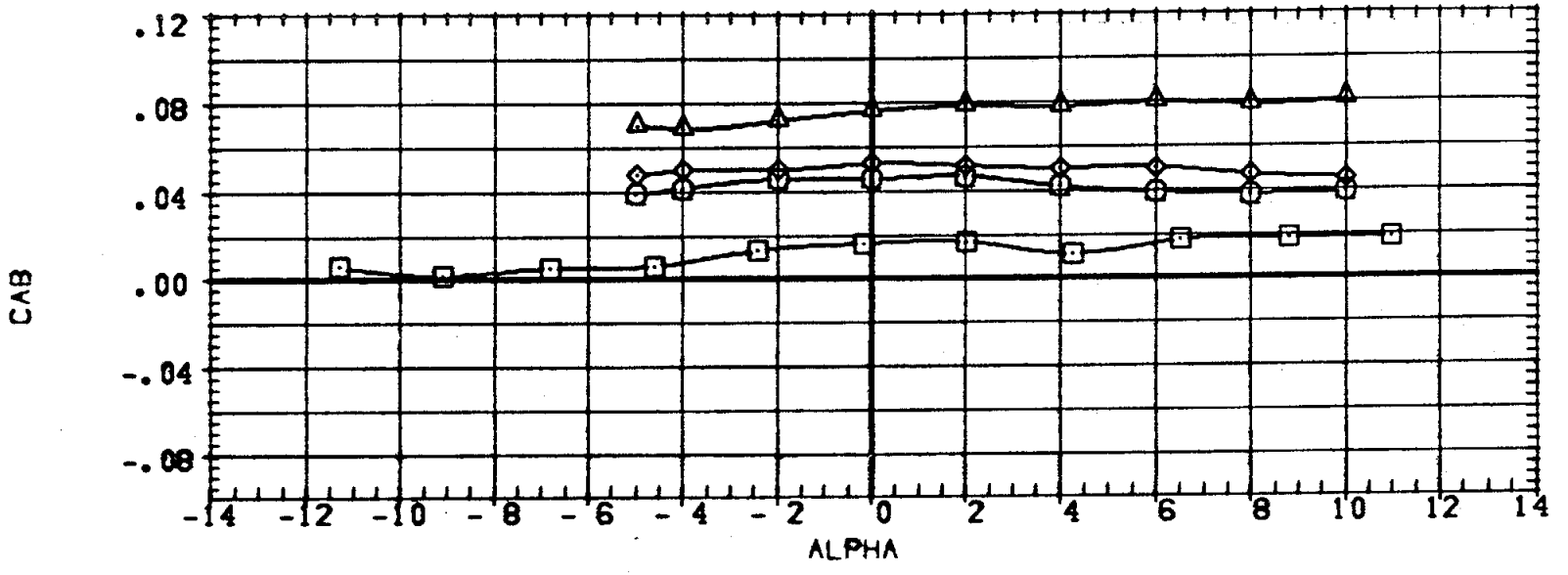


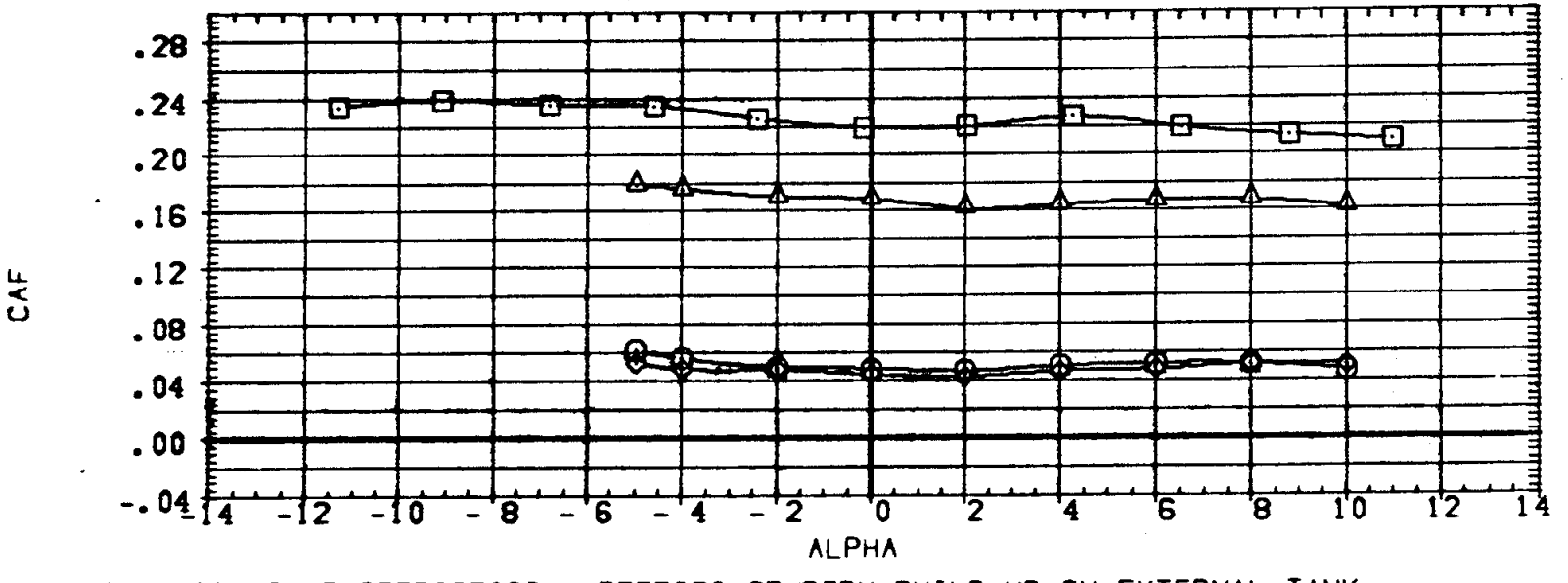
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	-1.200	.120	10.000	
(A72109)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	.000
(A72116)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	.000
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

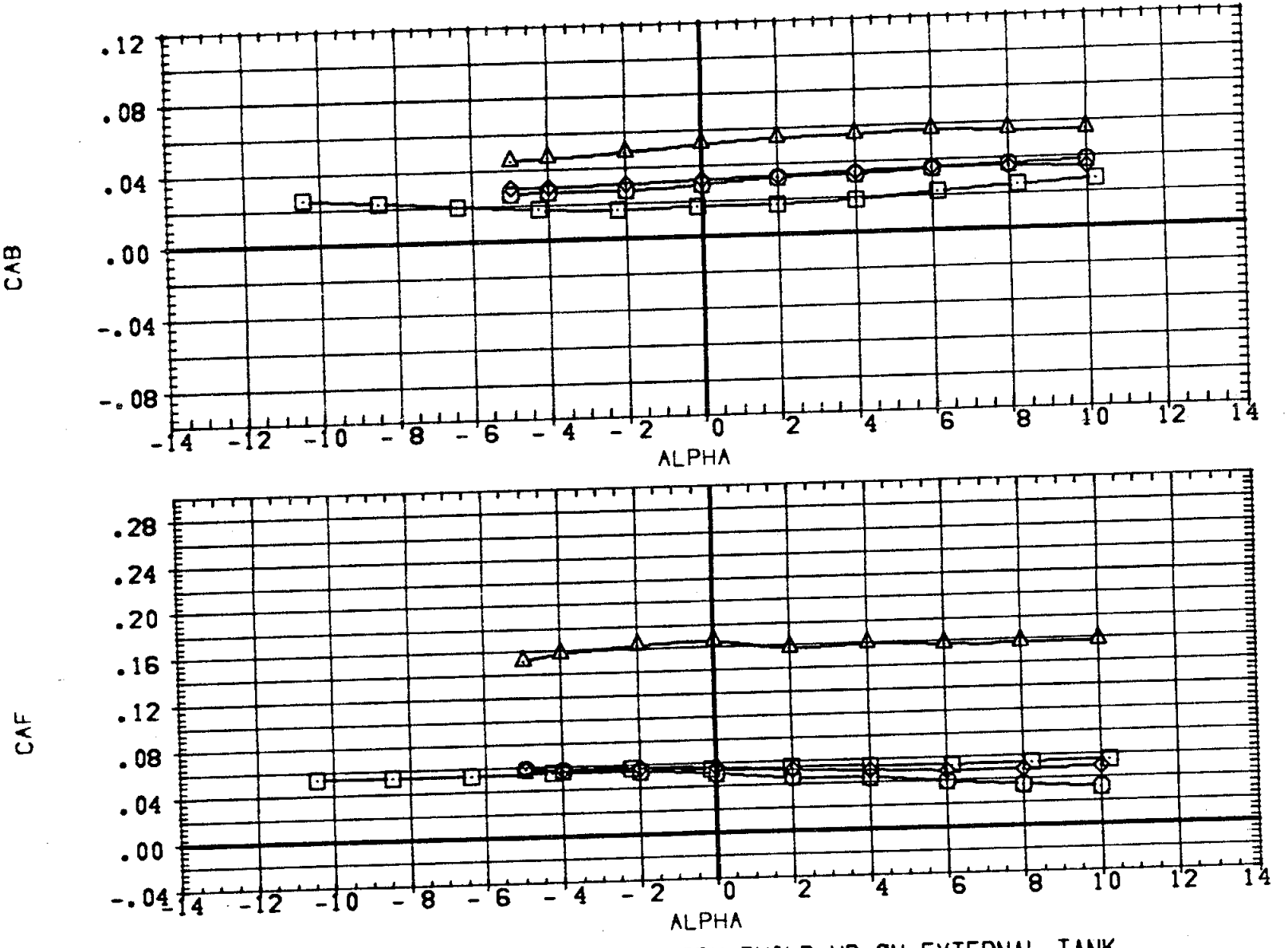
(F)MACH = 1.46

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72109)	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

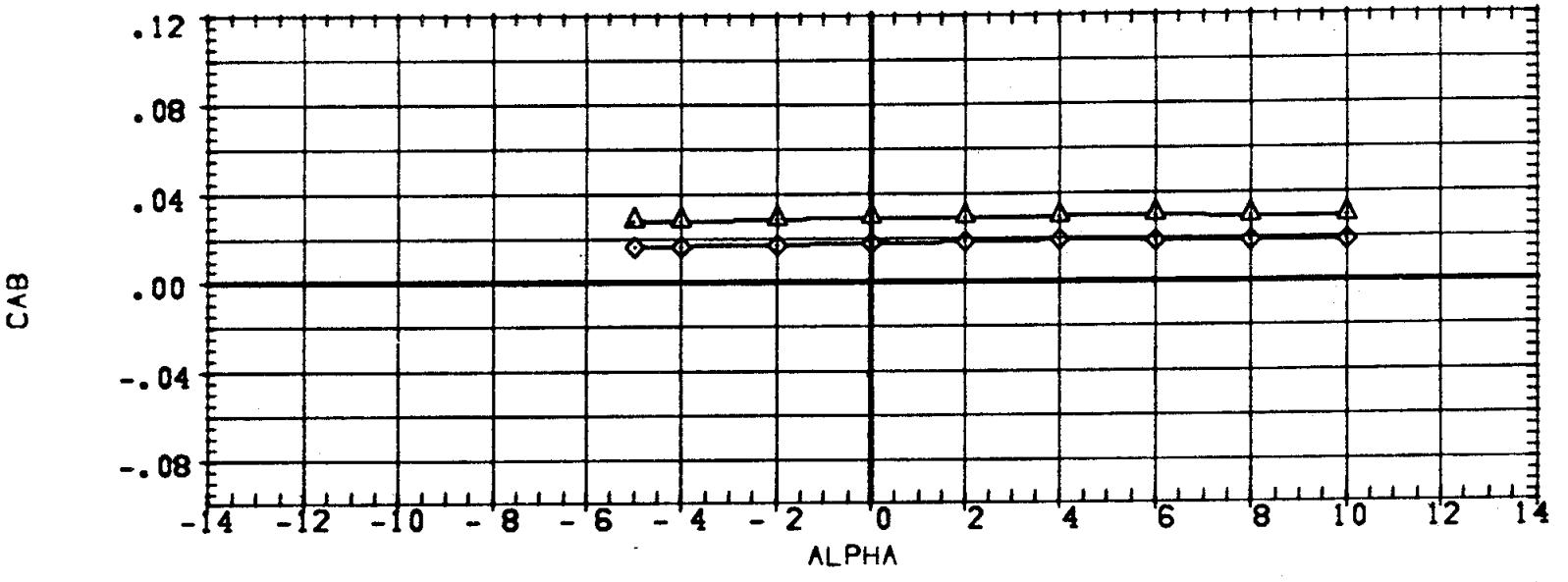


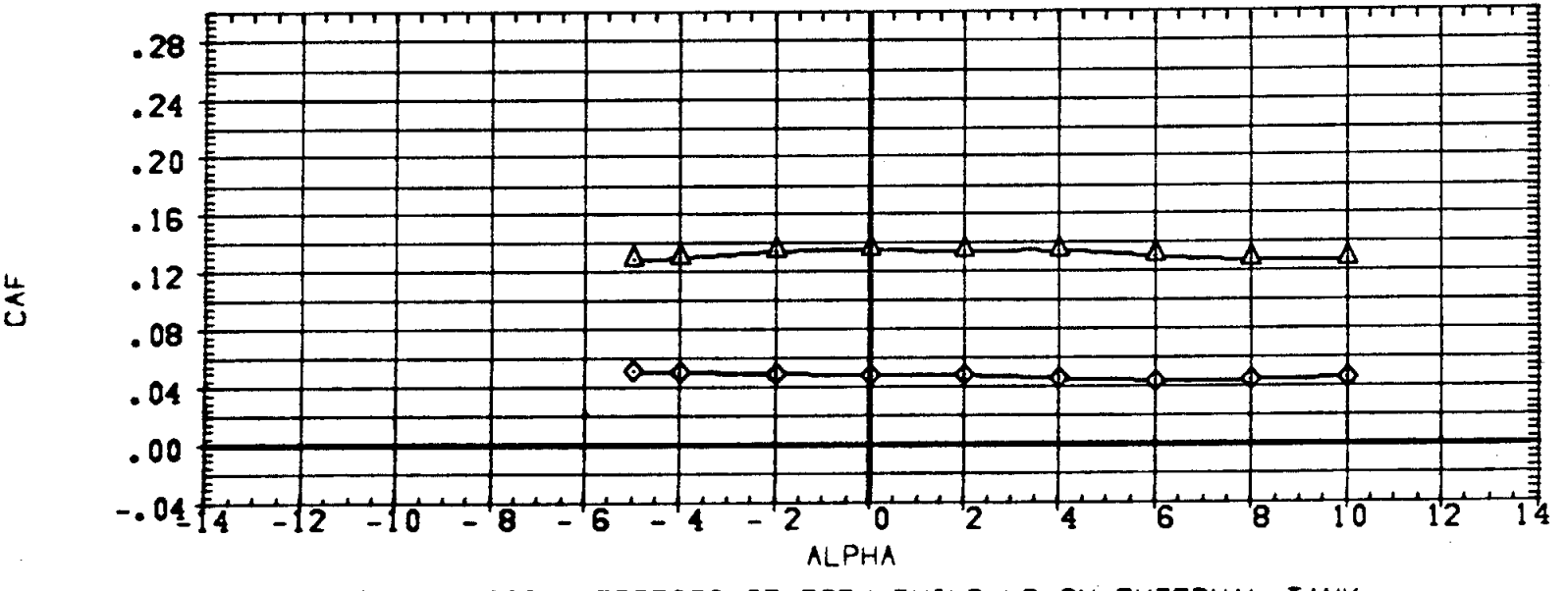
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(G)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72102)	○	DATA NOT AVAILABLE				
(A72109)	□	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O4)	-1.200	.120	10.000	
(A72116)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	-1.200	.120	10.000	.000
(A72701)	△	DATA NOT AVAILABLE	-1.200	.120	10.000	.000
(A72601)	▽	DATA NOT AVAILABLE				.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

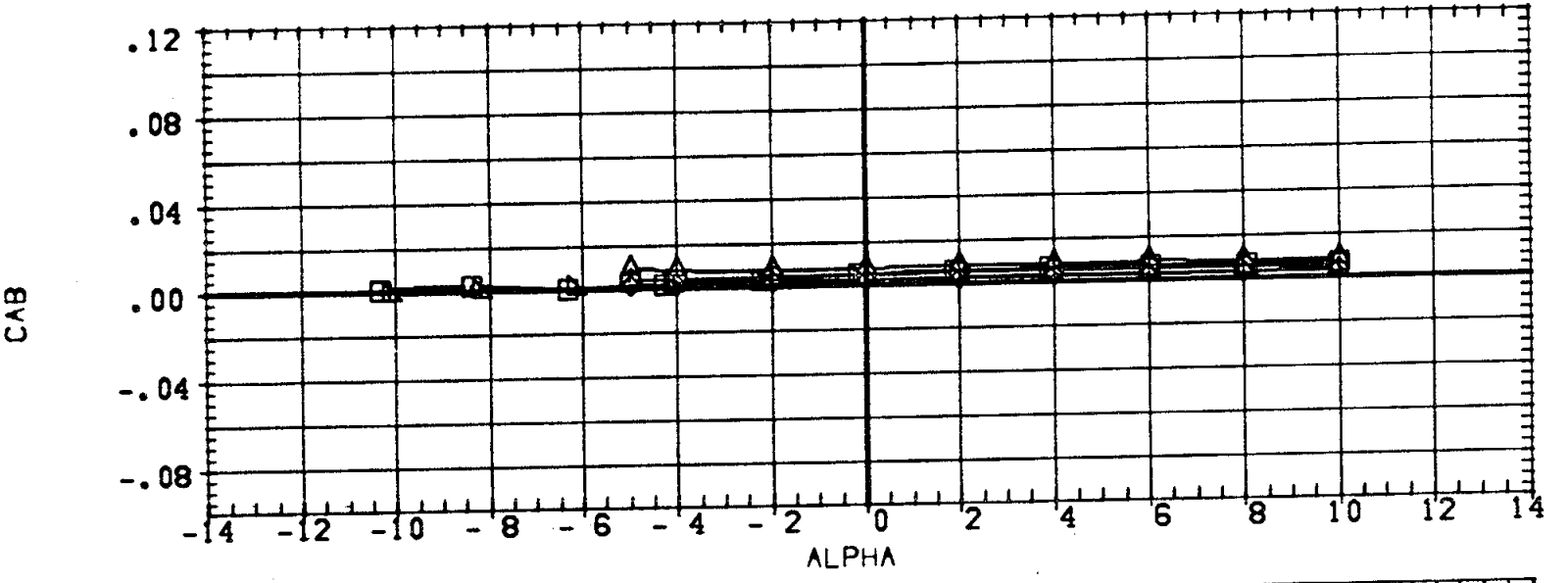
(H)MACH = 2.99

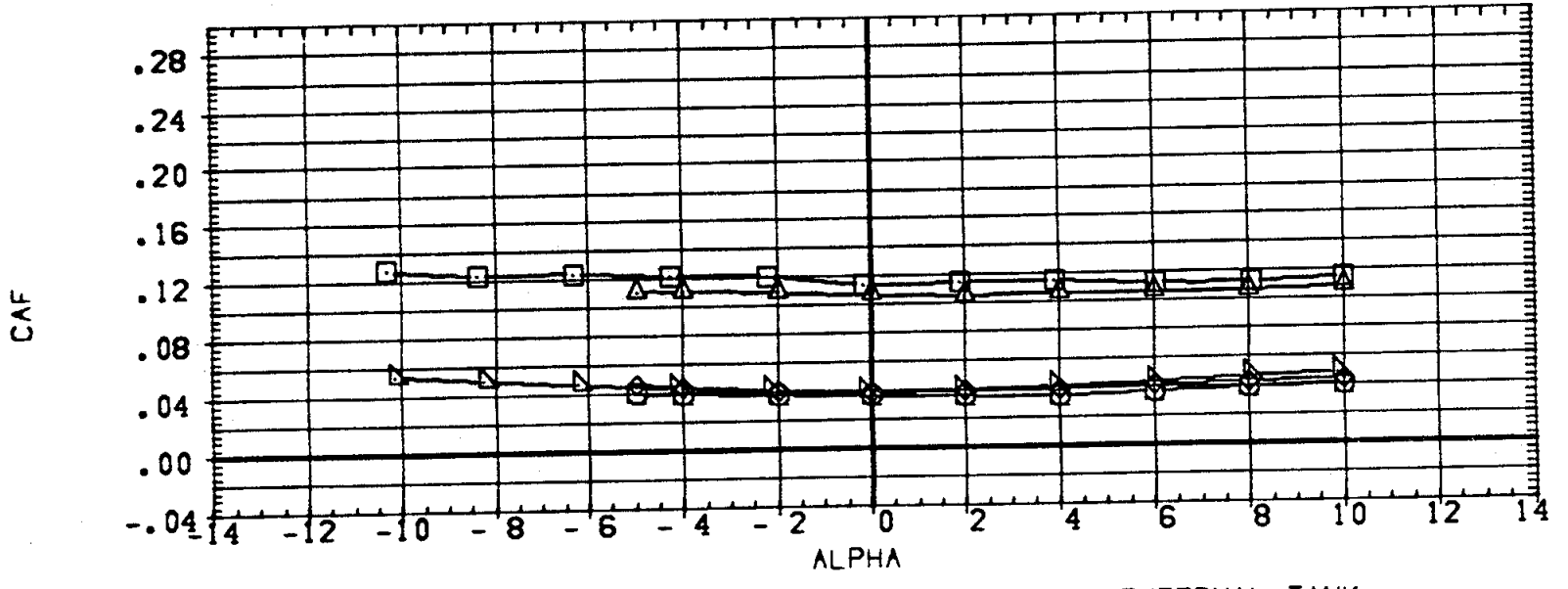
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72109)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72116)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	.000
-1.200	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





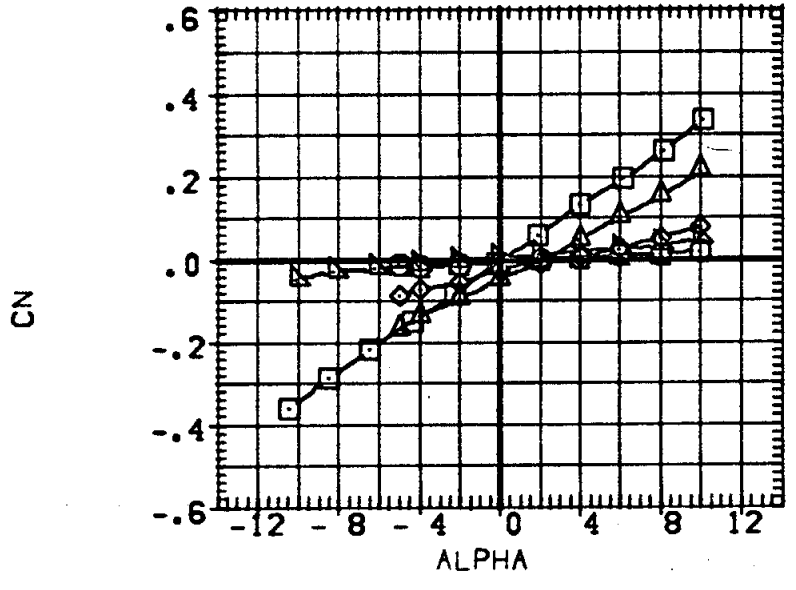
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

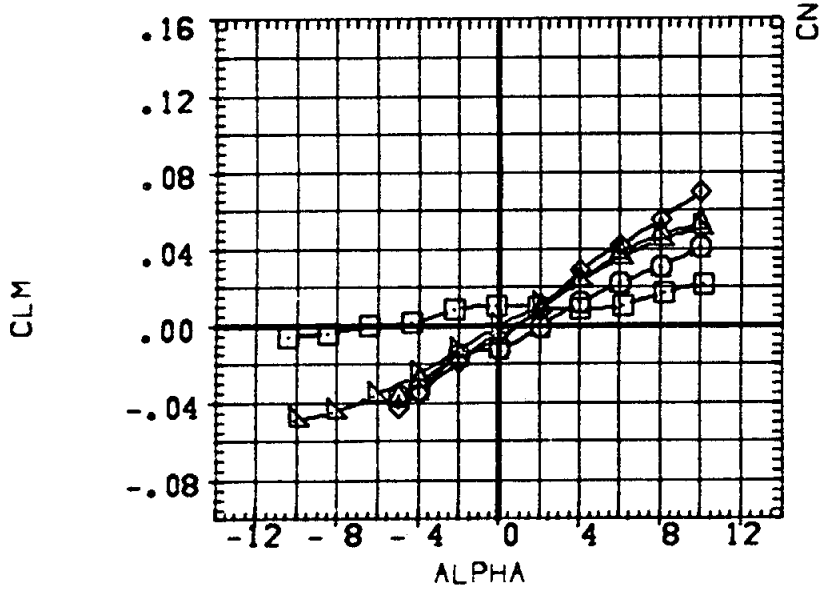
(1)MACH = 4.96

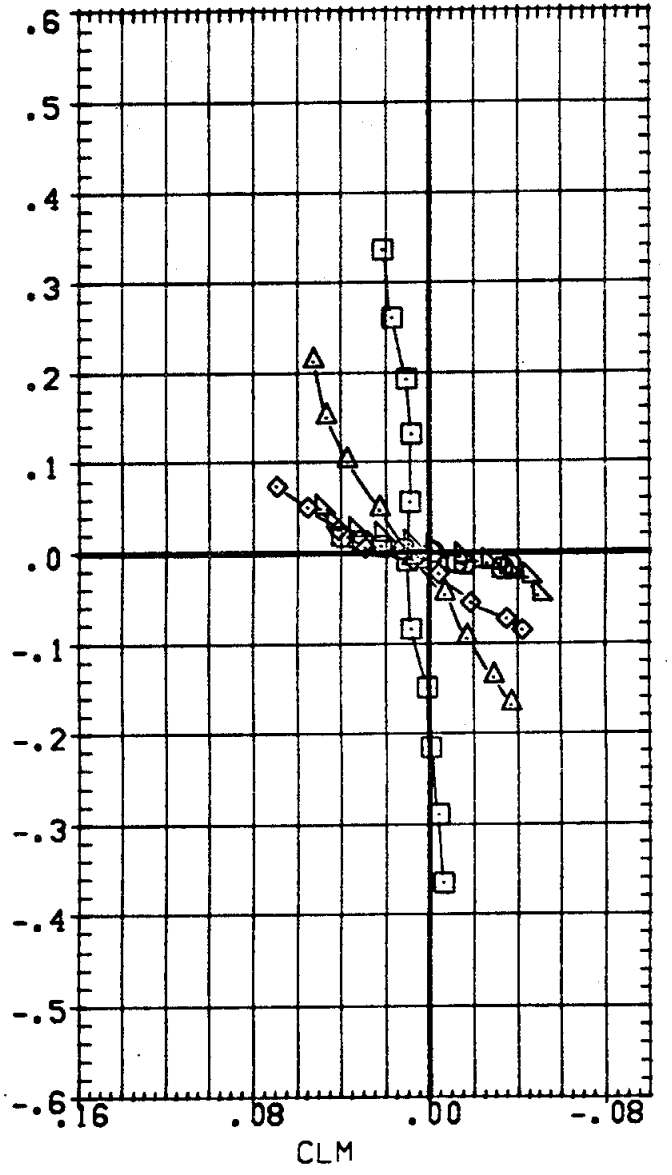
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72110)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







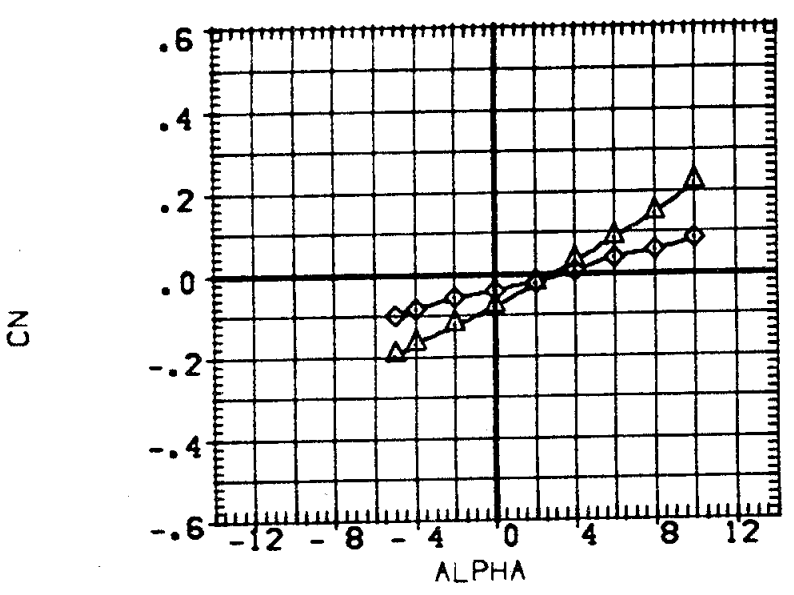
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

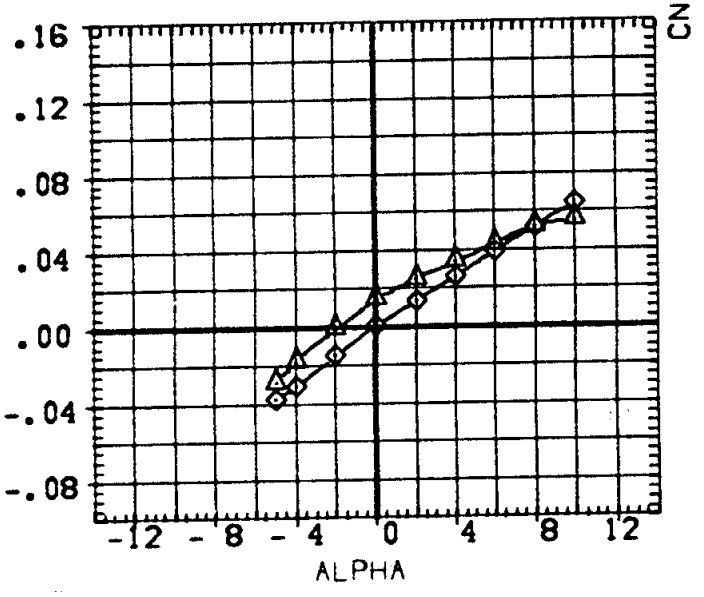
(A)MACH = .60

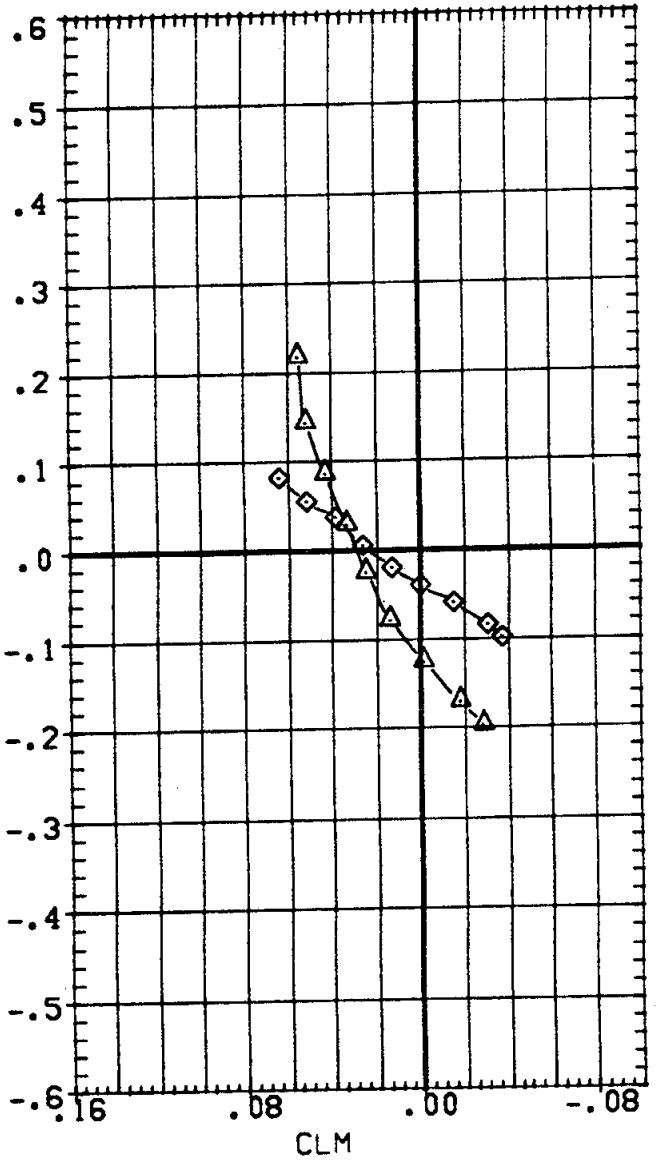
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	DATA NOT AVAILABLE
(A72110)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)	□	DATA NOT AVAILABLE
(A72601)	▽	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

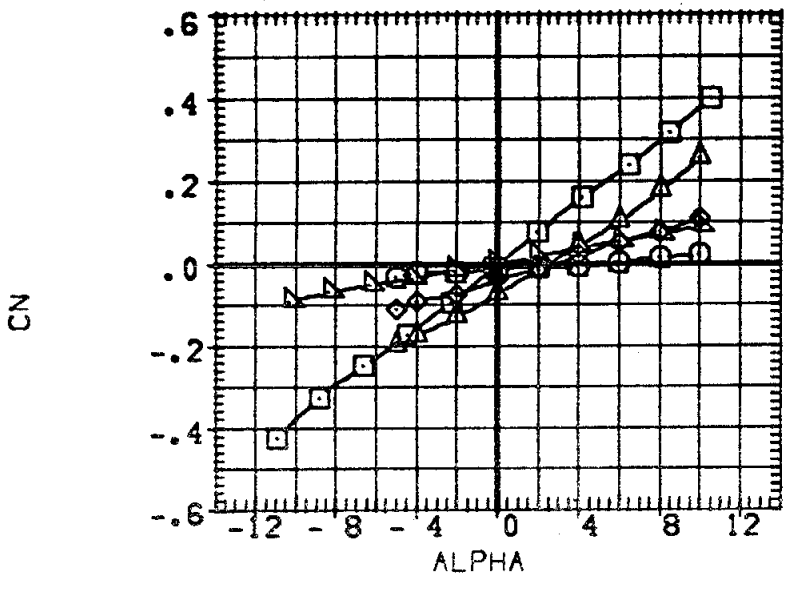
(B)MACH = .80

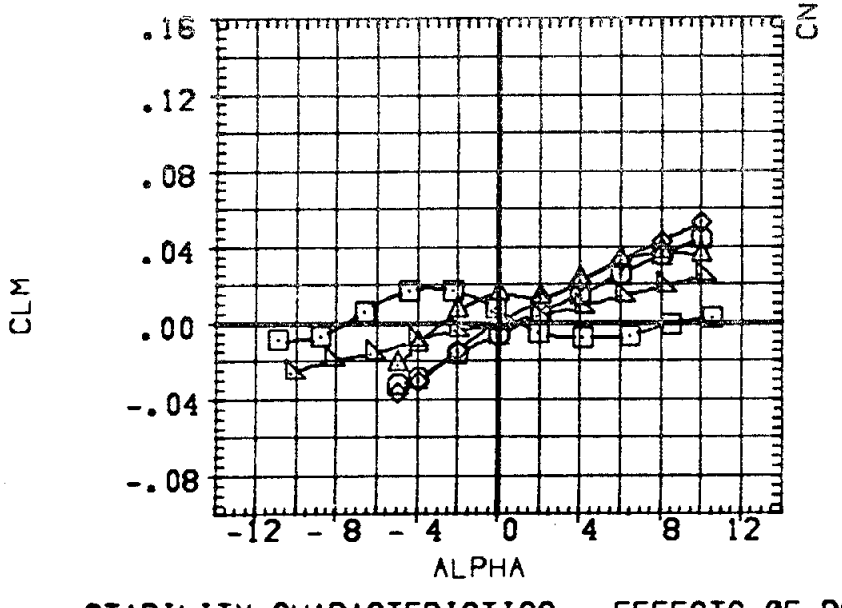
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC S45 (IA1) MOD ATP LV-(T3)/(O1)
(A72110)	△	MSFC S45 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72117)	◇	MSFC S45 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	□	MSFC S45 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC S45 (IA1) NAR ATP BL LV-(T3)

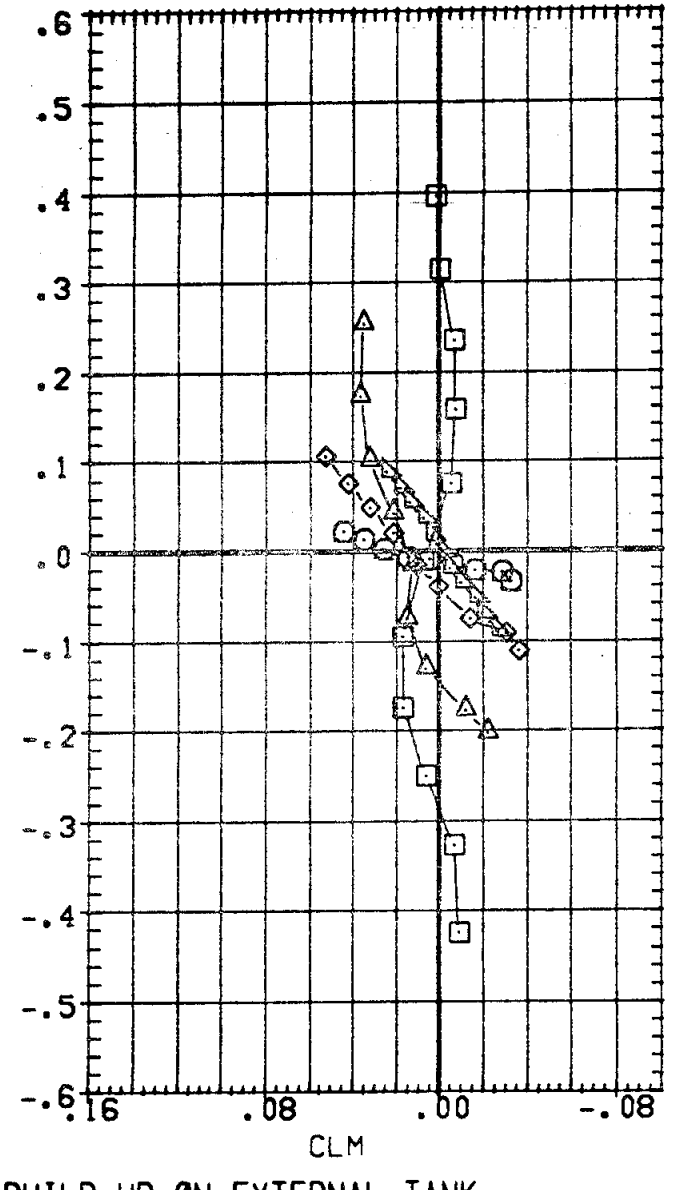
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

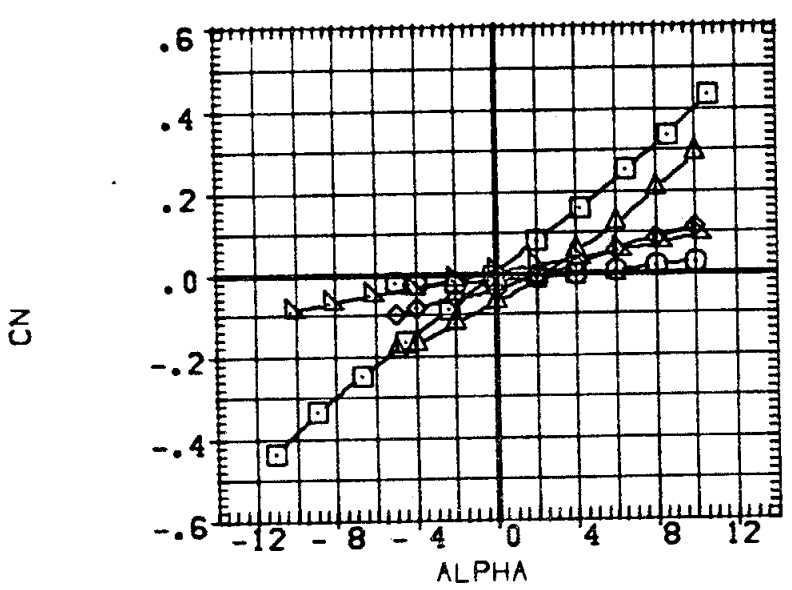
(C)MACH = .90

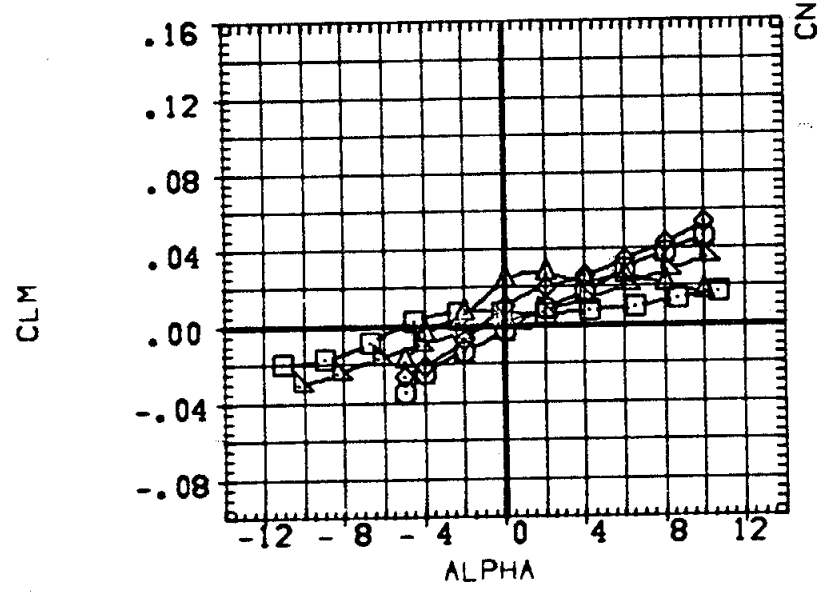
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (1A1) MOD ATP LV-(TS)/(O1)
(A72110)	△	MSFC 545 (1A1) MOD ATP LV-(TS)(S1)/(O1)
(A72117)	◇	MSFC 545 (1A1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)	□	MSFC 545 (1A1) NAR ATP BL LV-(TS)(S1)
(A72601)	▽	MSFC 545 (1A1) NAR ATP BL LV-(TS)

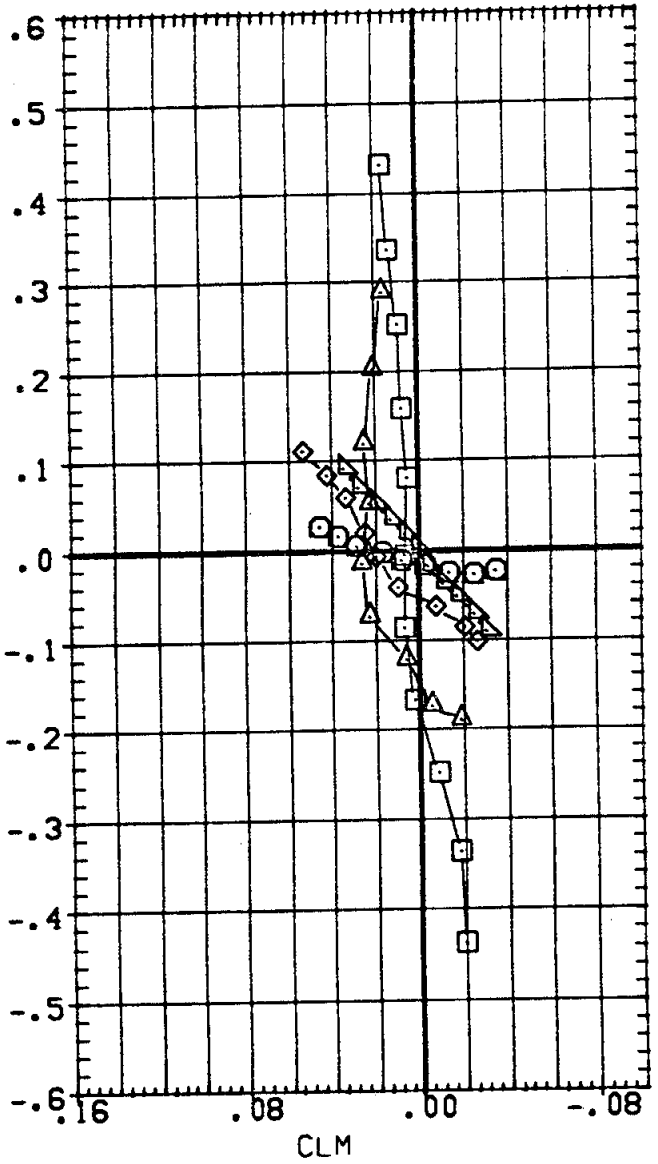
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

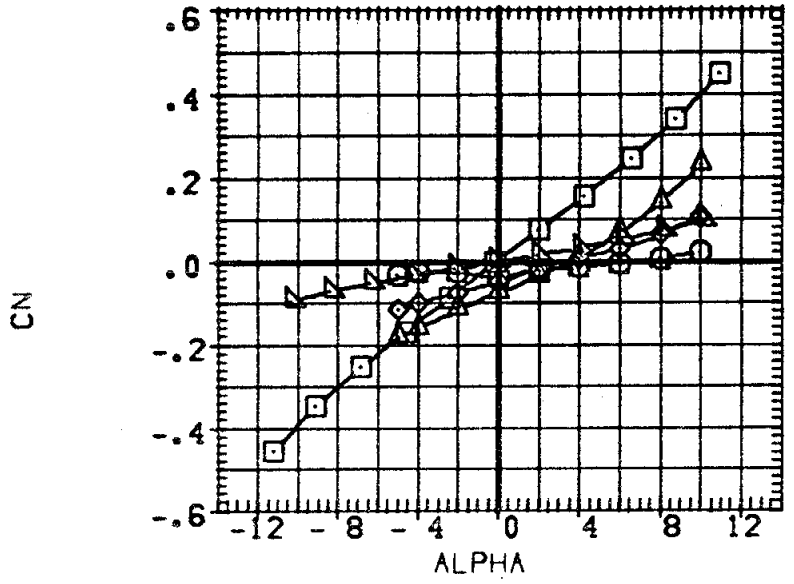
(D)MACH = .99

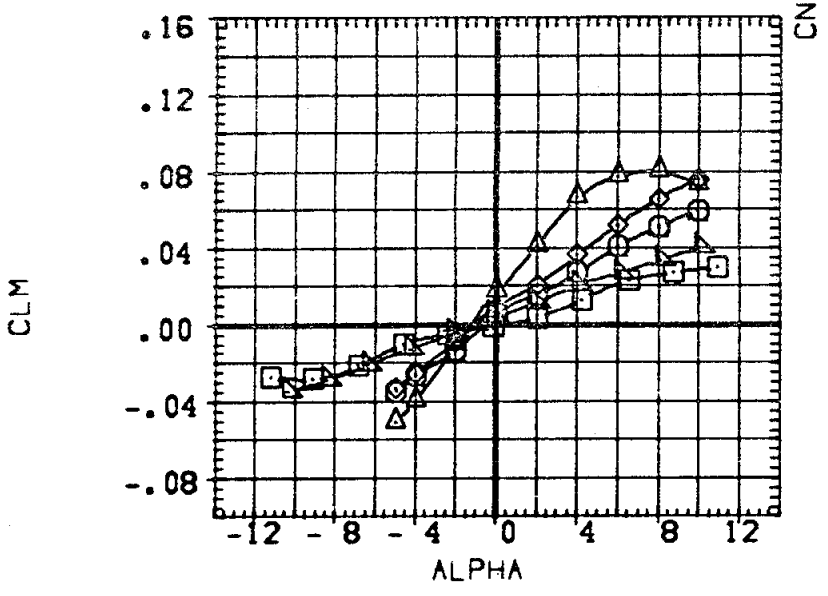
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2103)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(AP2110)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(AP2117)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(AP2701)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(AP2601)	⊠	MSFC 545 (IA1) NAR ATP BL LV-(TS)

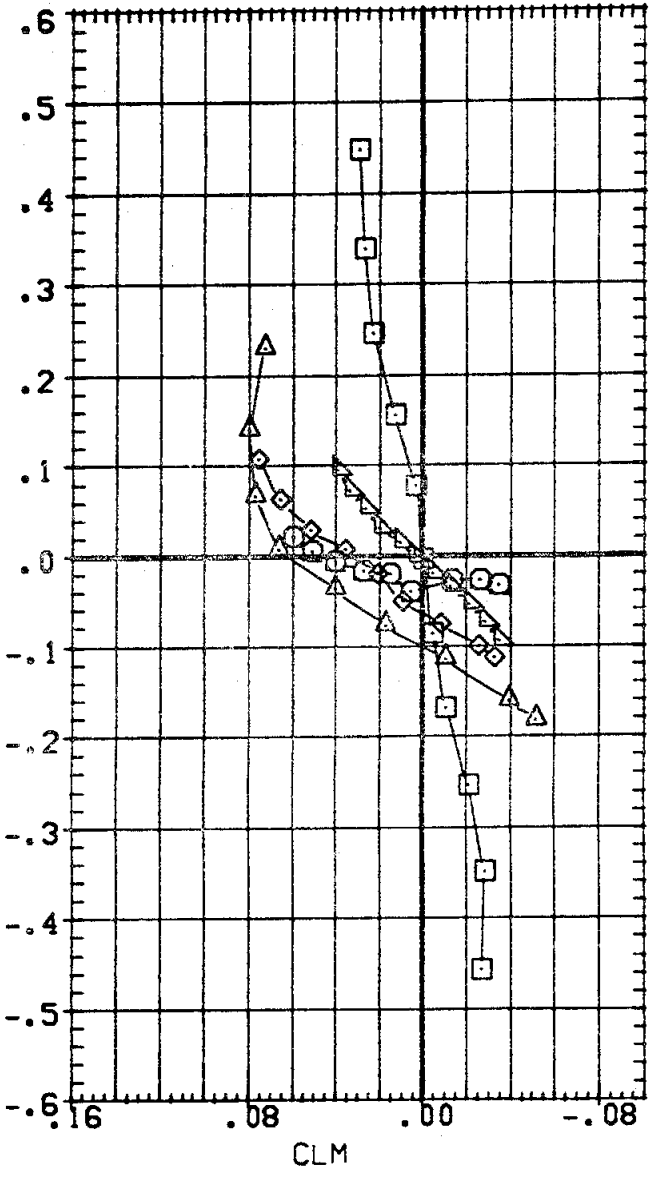
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

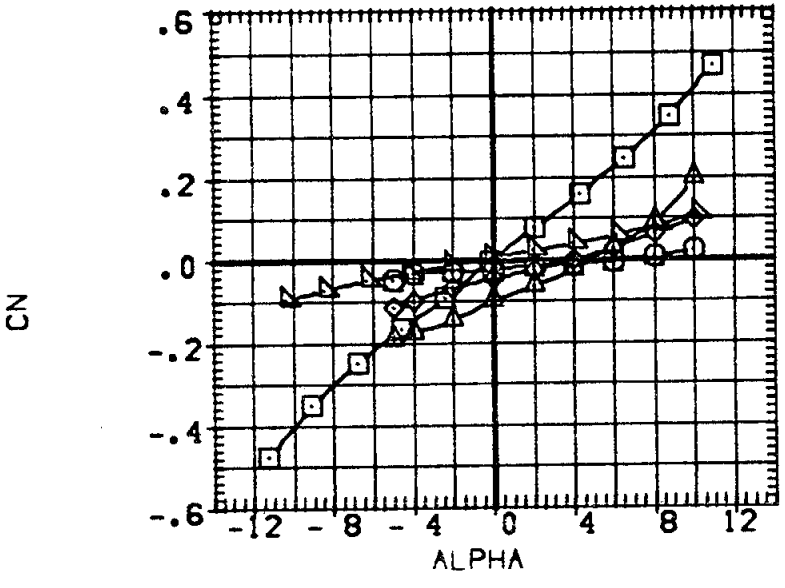
(E)MACH = 1.19

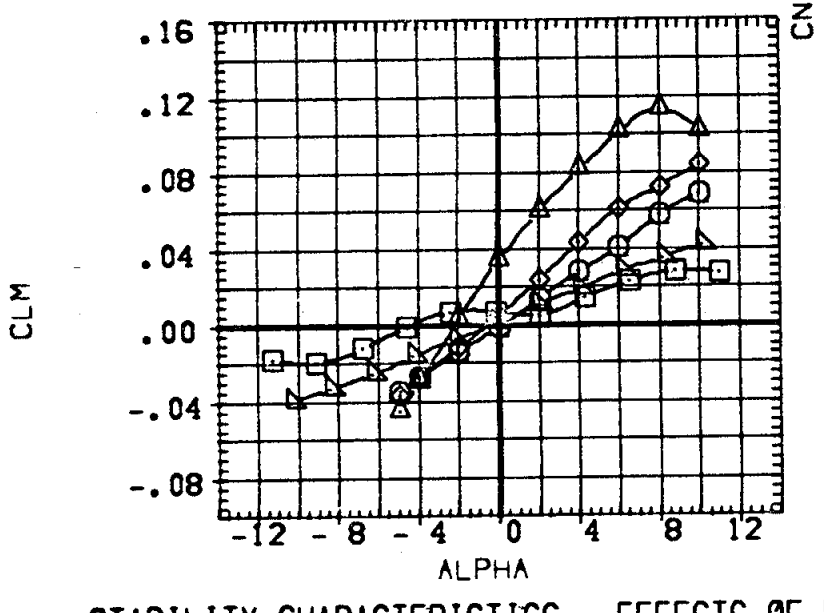
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)		MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72110)		MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72117)		MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)		MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)		MSFC 545 (IA1) NAR ATP BL LV-(TS)

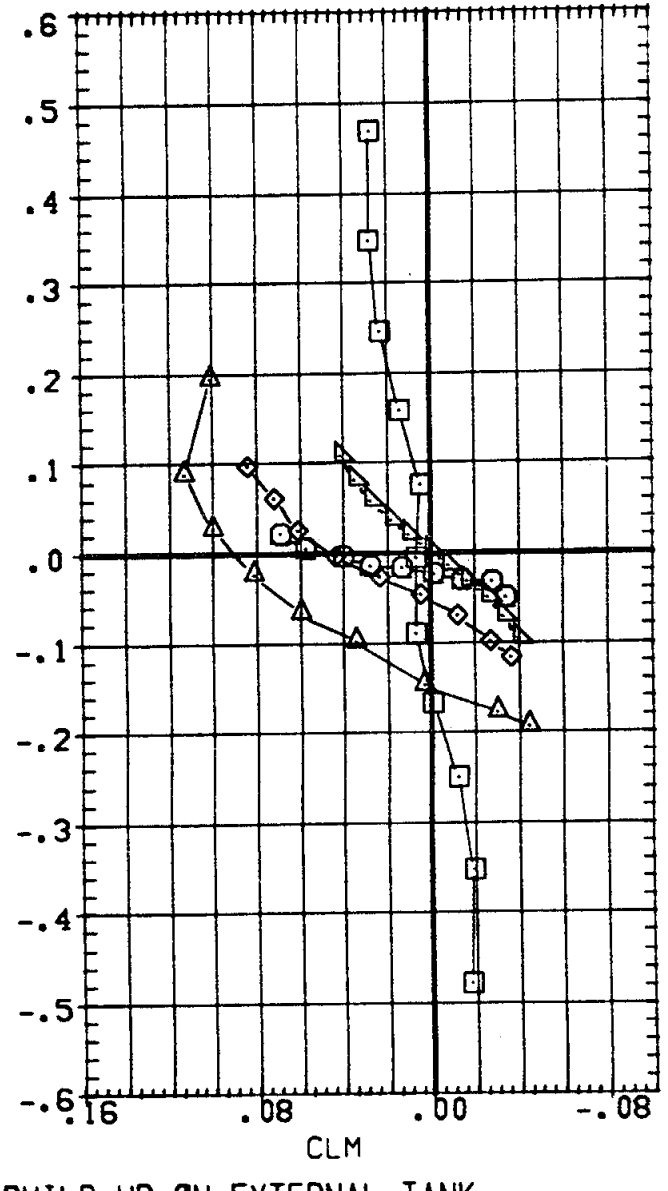
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







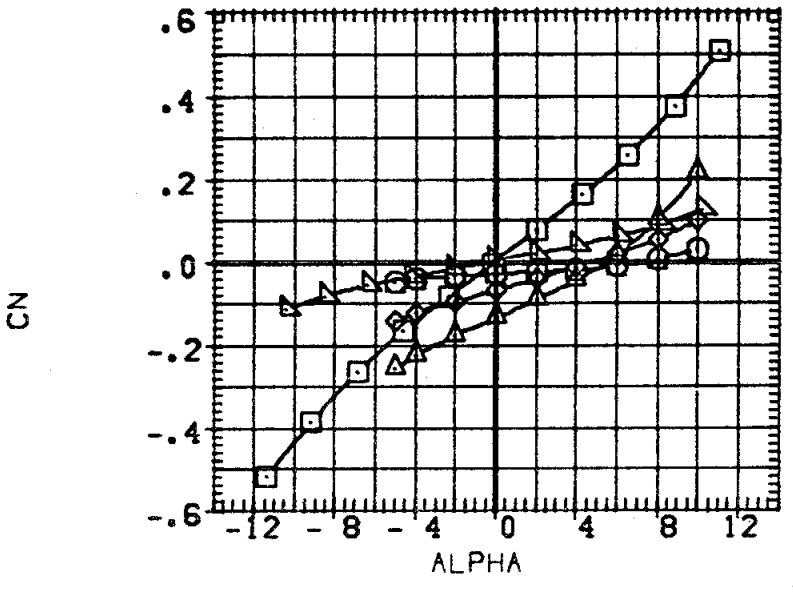
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

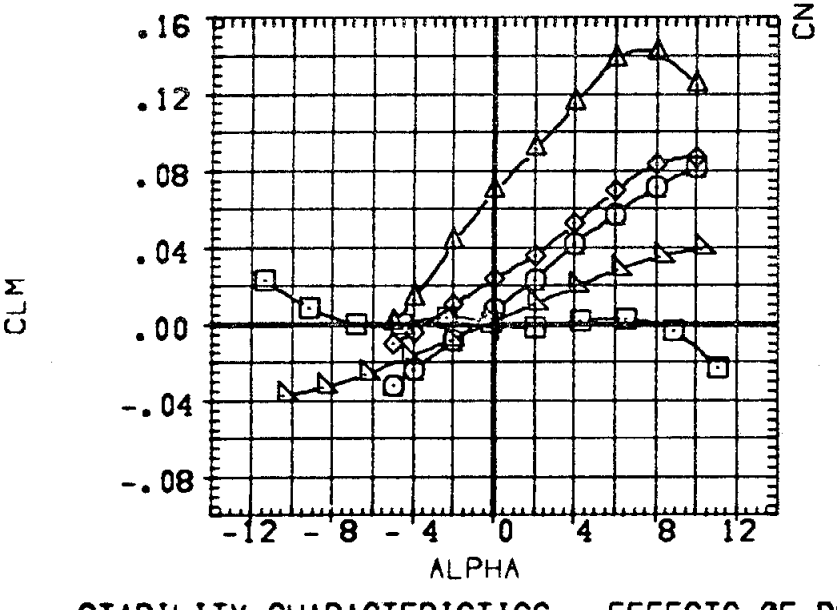
(F)MACH = 1.46

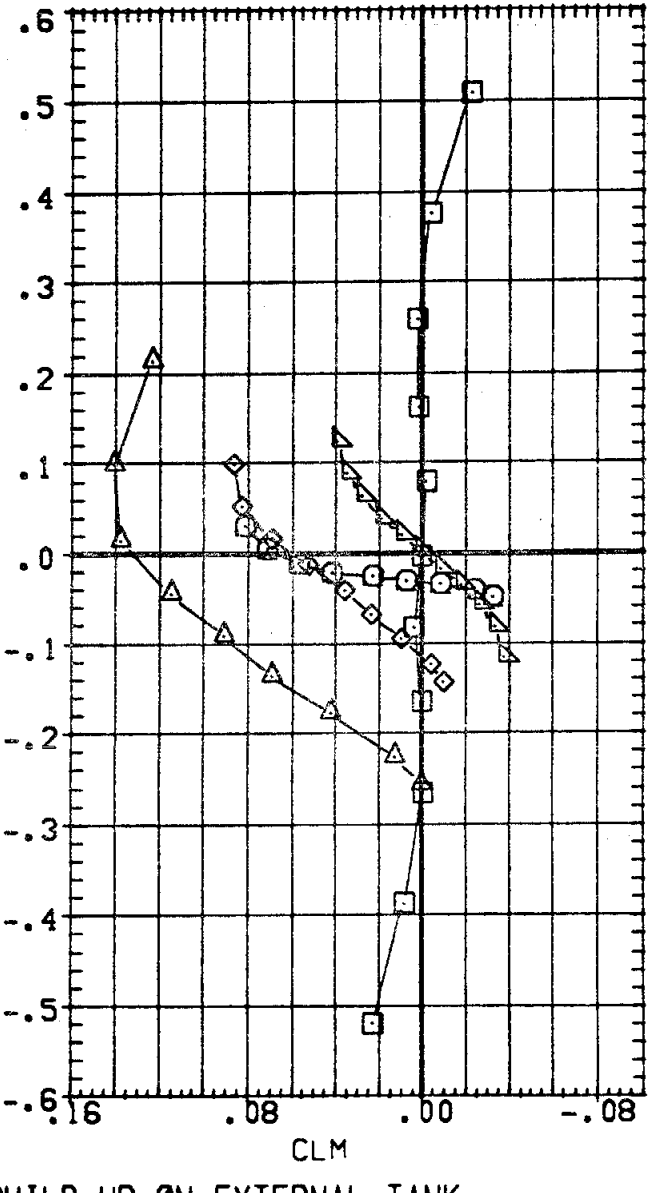
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72110)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

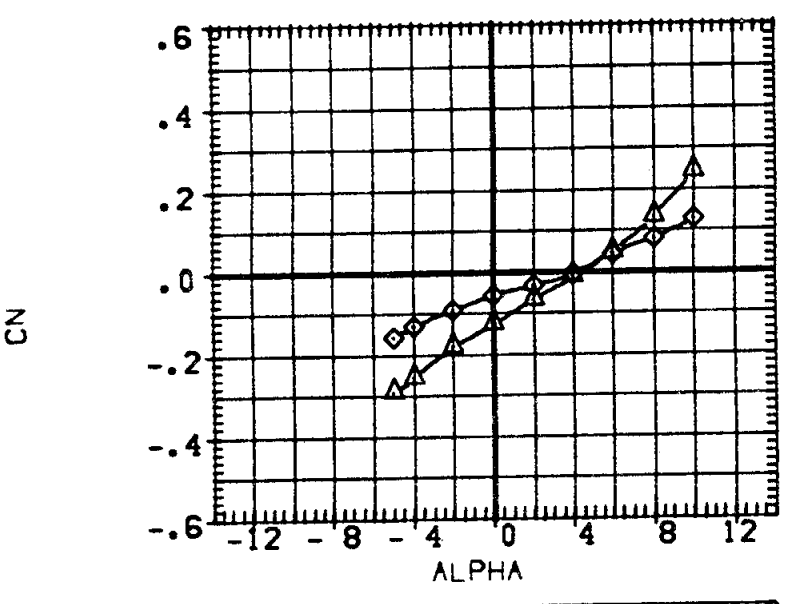
(G)MACH = 1.96

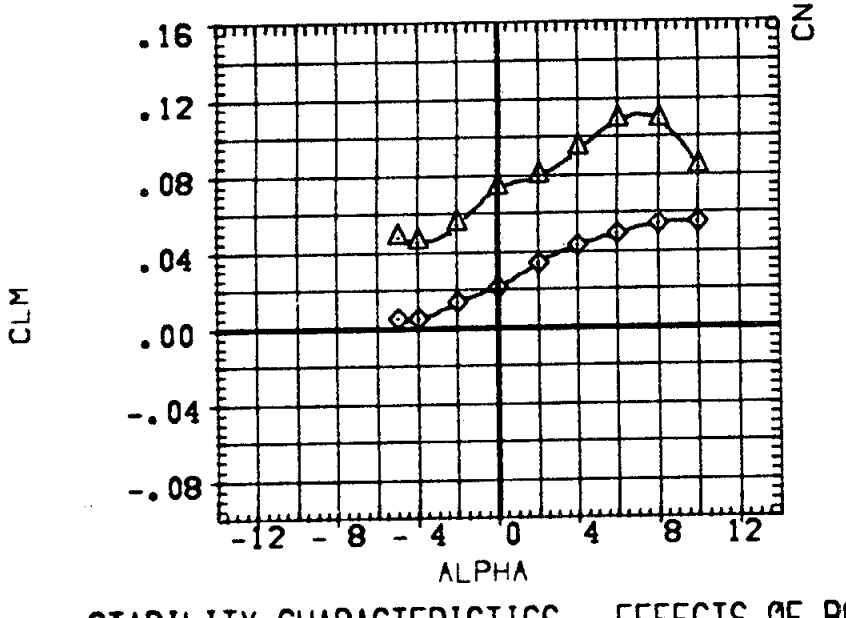
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	◇	DATA NOT AVAILABLE
(A72110)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72117)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)		DATA NOT AVAILABLE
(A72601)		DATA NOT AVAILABLE

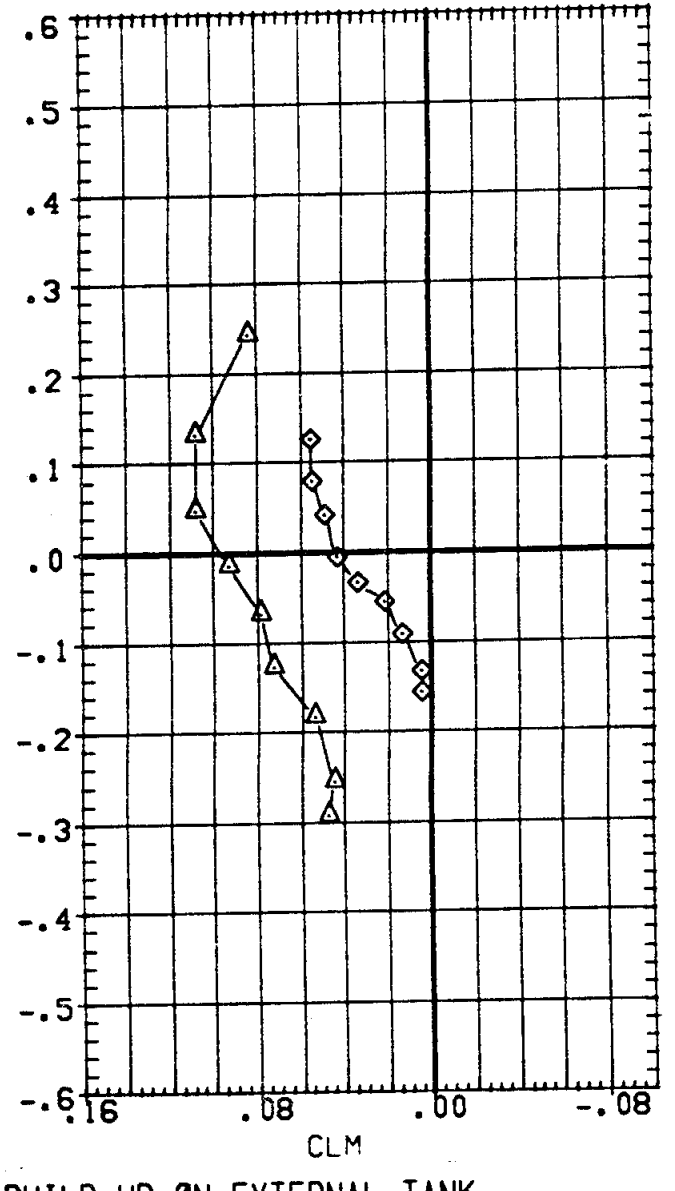
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







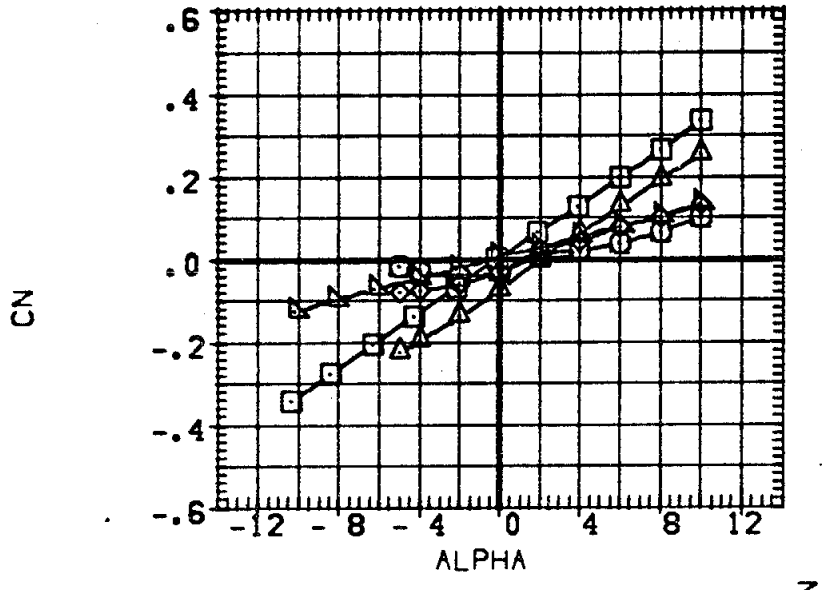
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

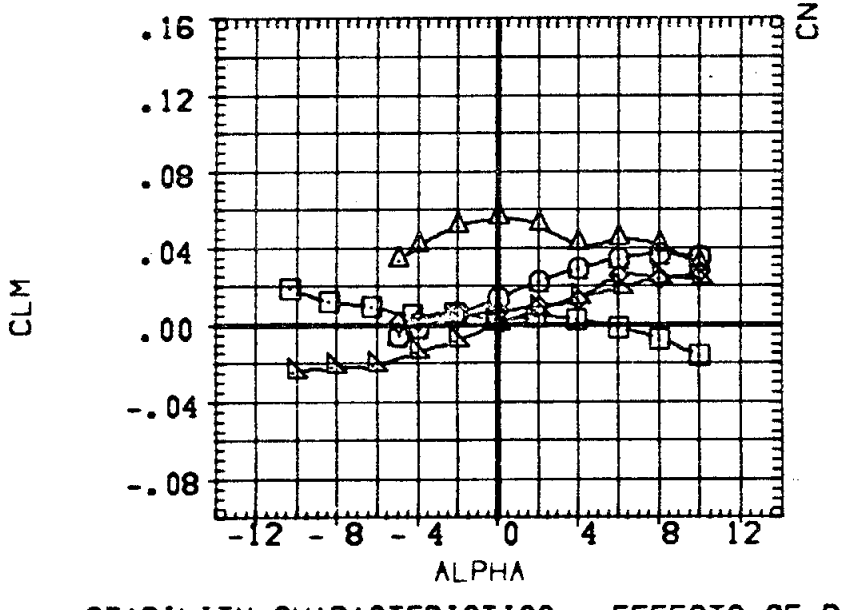
(H)MACH = 2.99

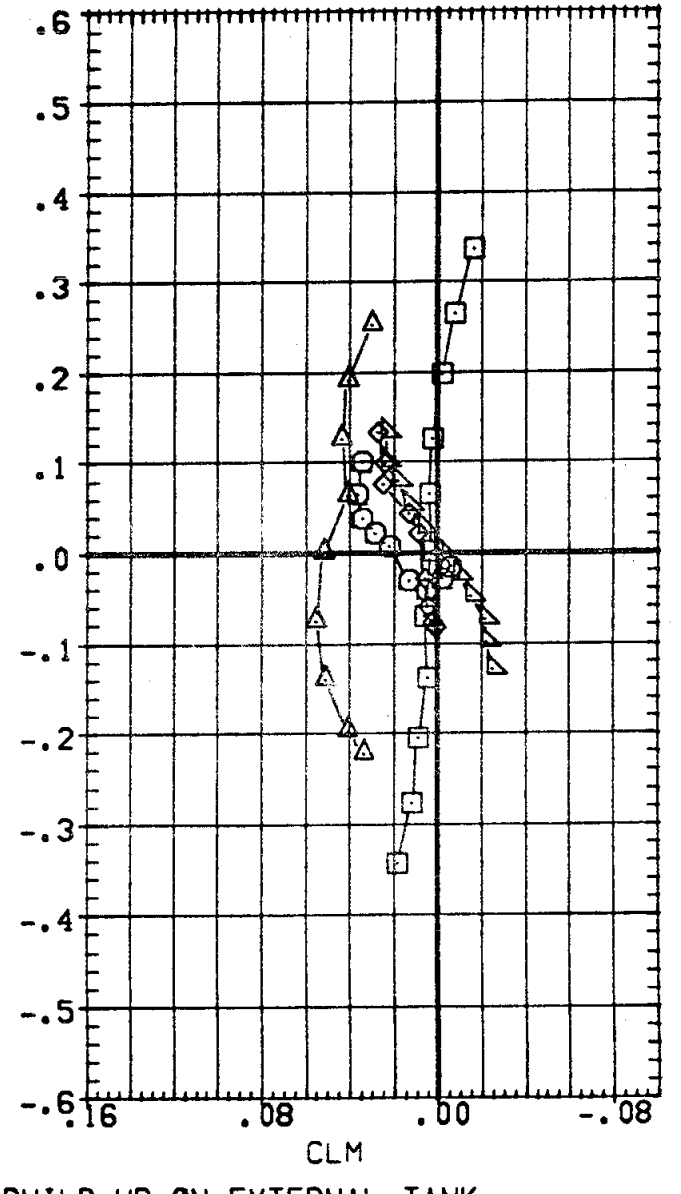
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72110)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







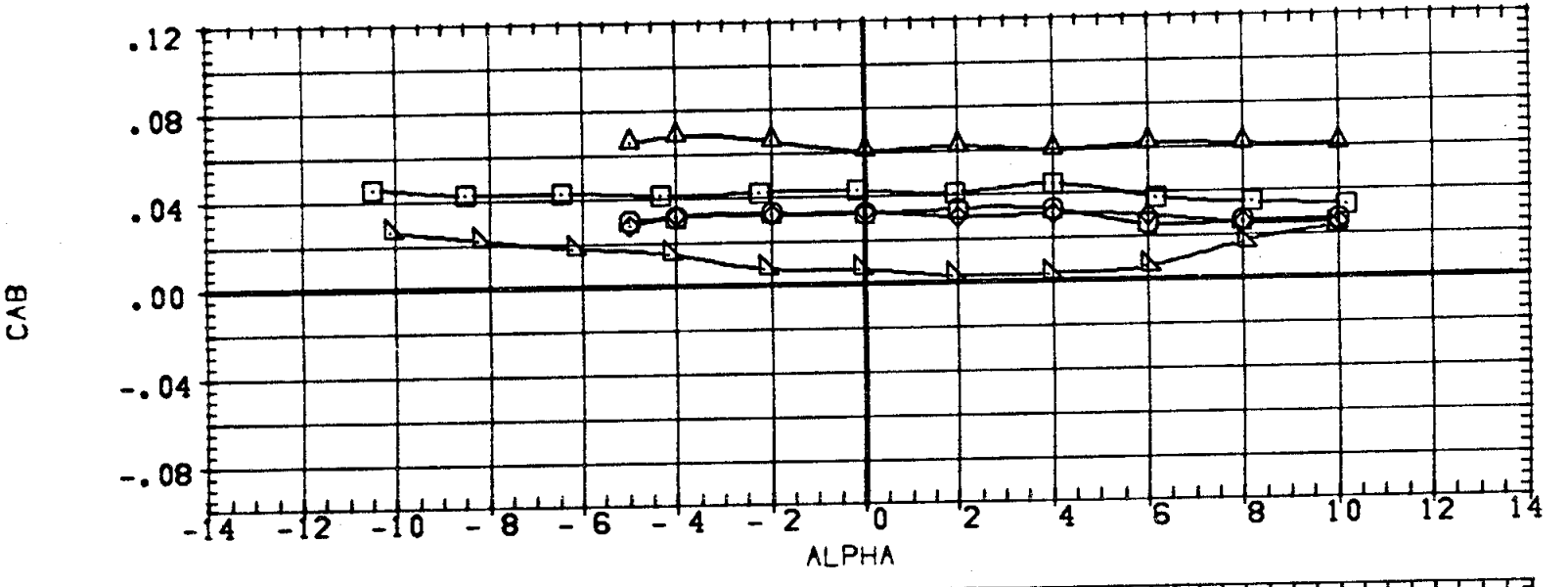
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

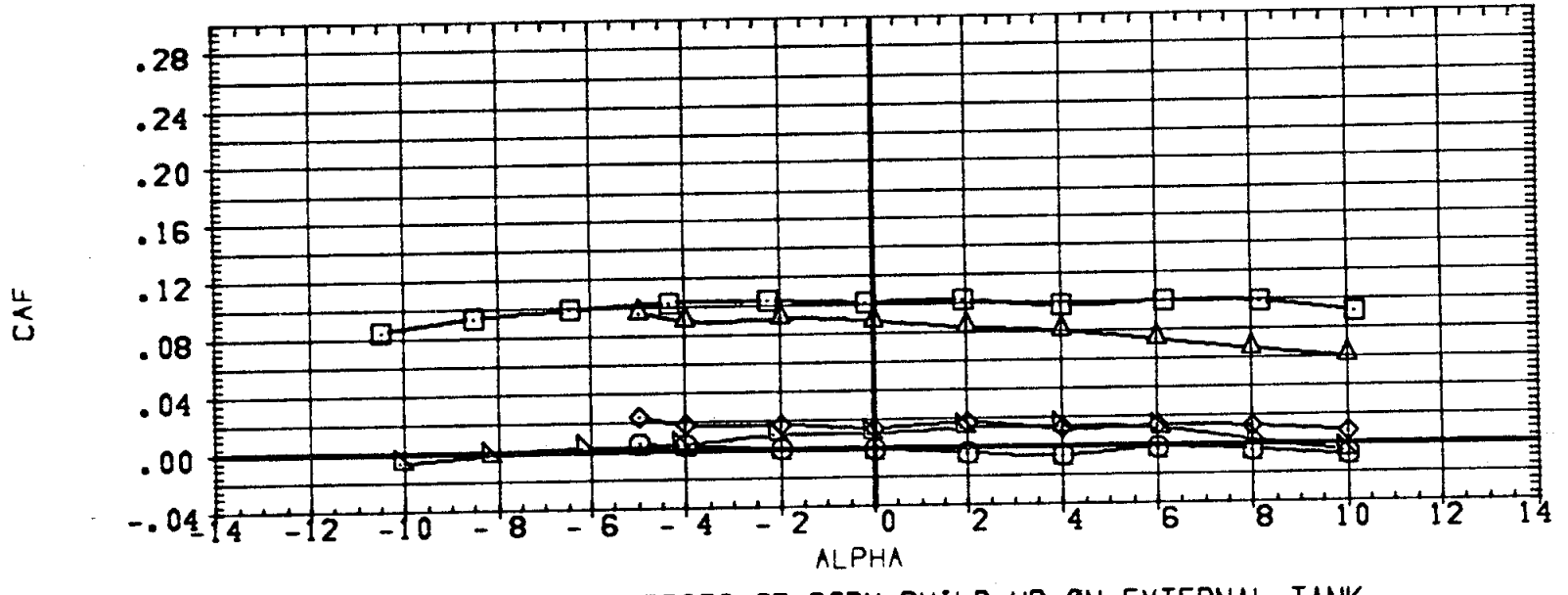
(I)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)		MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72110)		MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72117)		MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72701)		MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72601)		MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





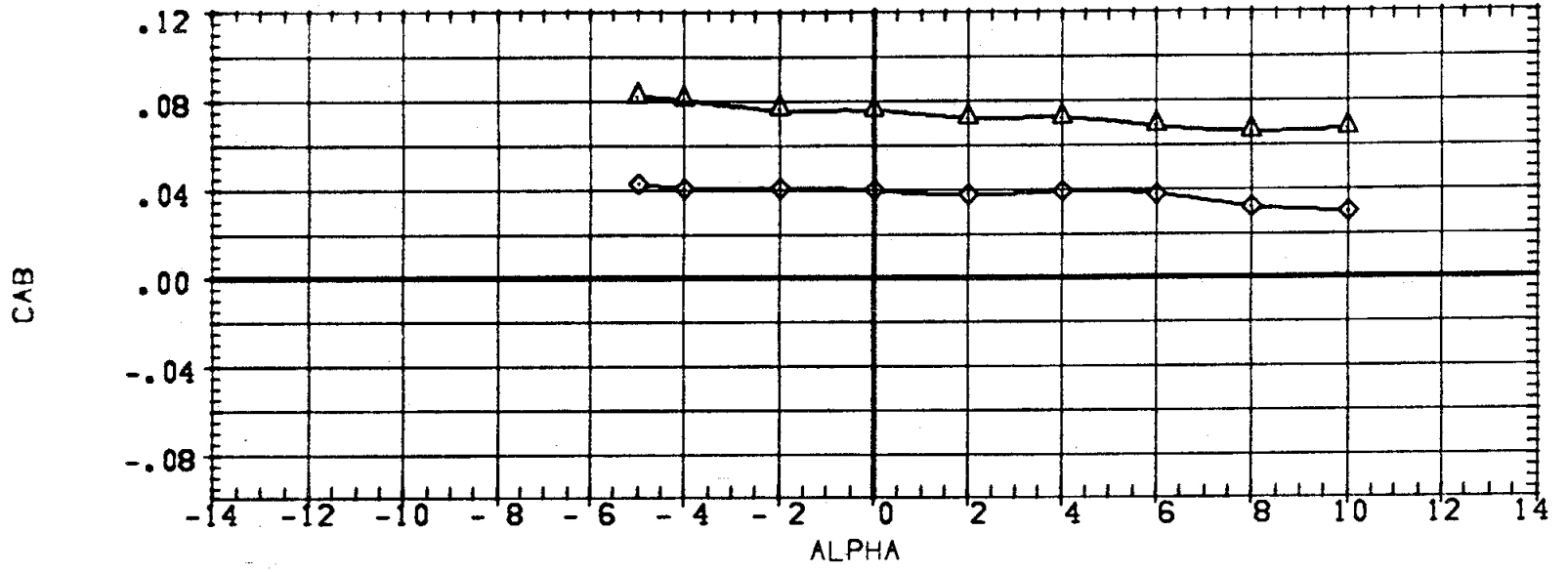
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

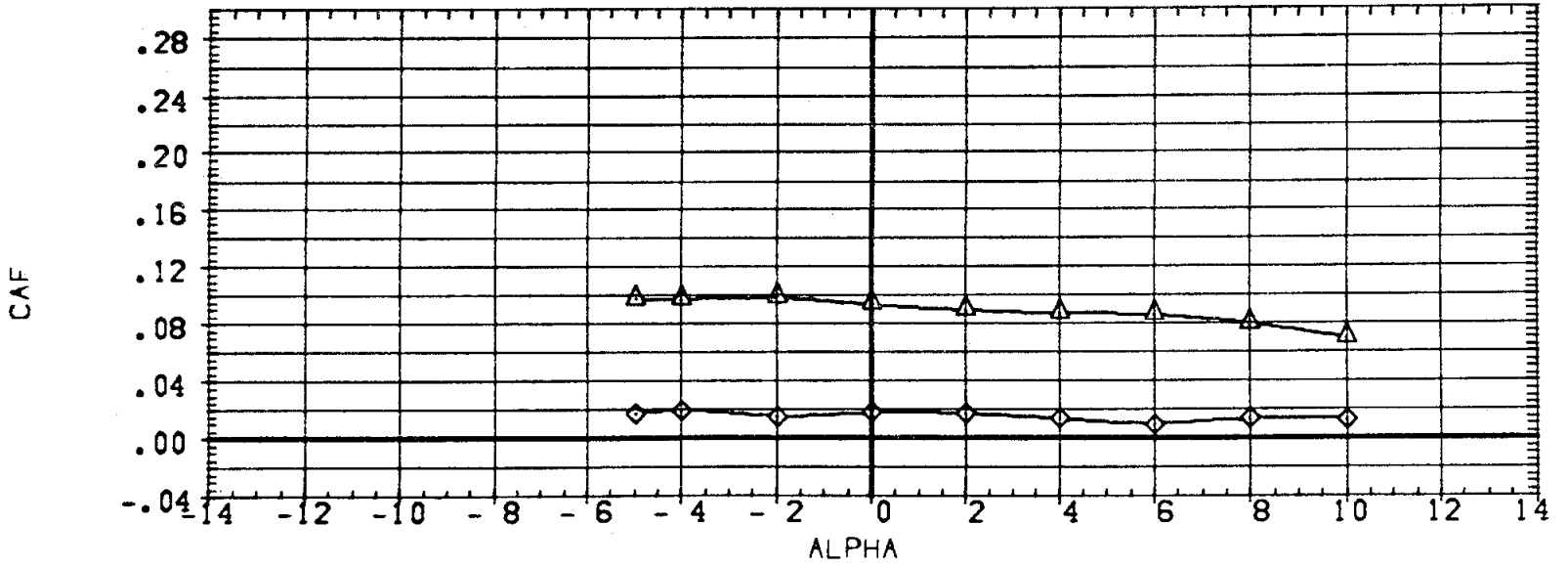
(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)		DATA NOT AVAILABLE				
(A72110)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	1.500	.120	10.000	.000
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	1.500	.120	10.000	.000
(A72701)		DATA NOT AVAILABLE				.000
(A72601)		DATA NOT AVAILABLE				

REFERENCE INFORMATI

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

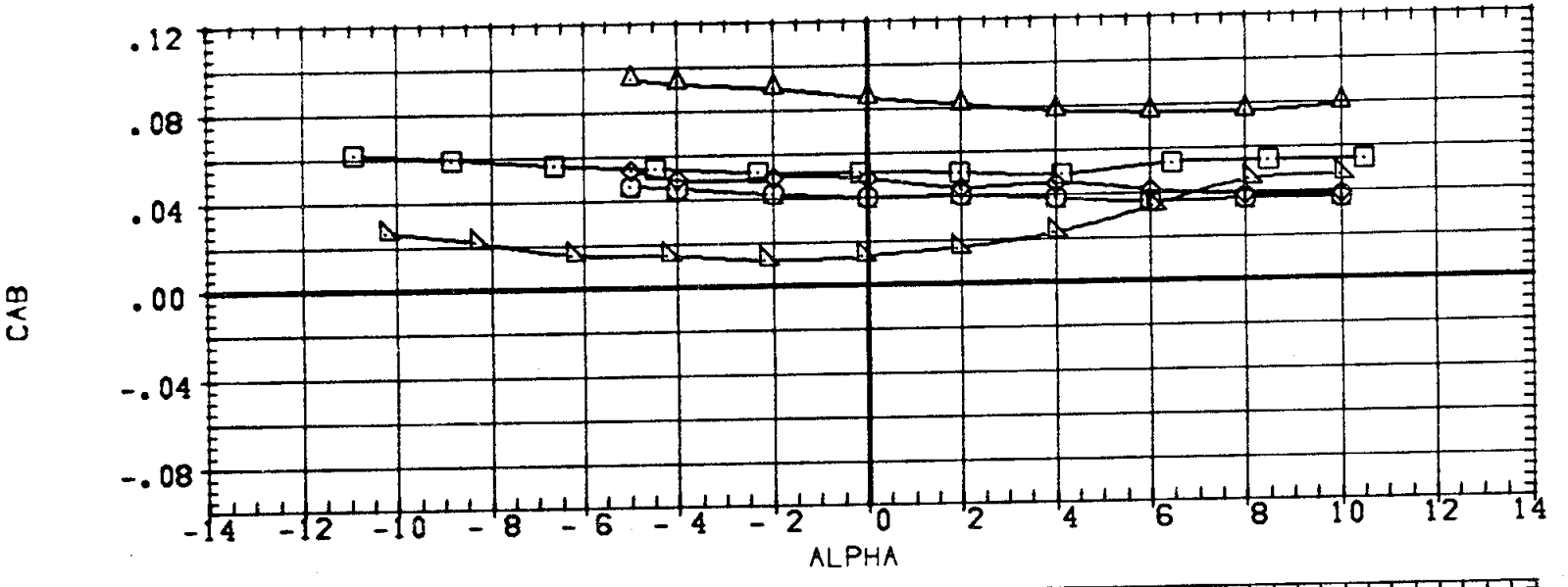
(B)MACH = .80

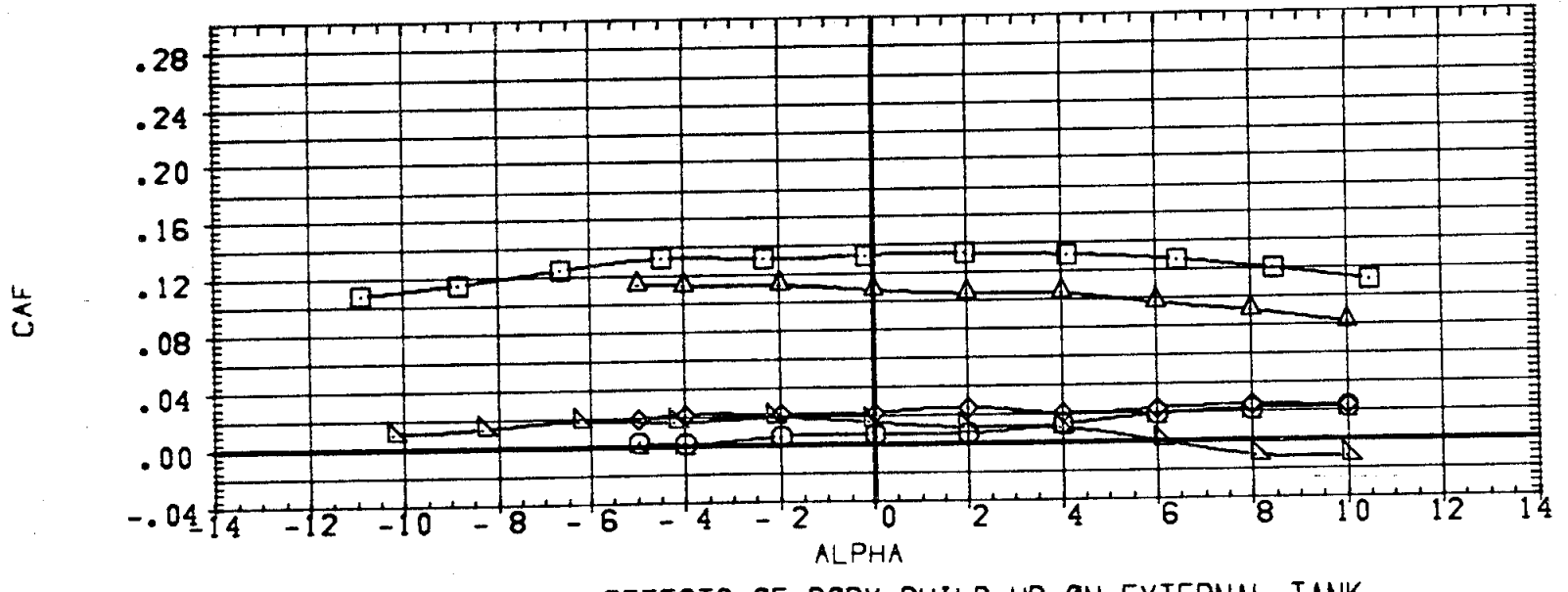
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	△	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72110)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	⊗	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	⊙	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



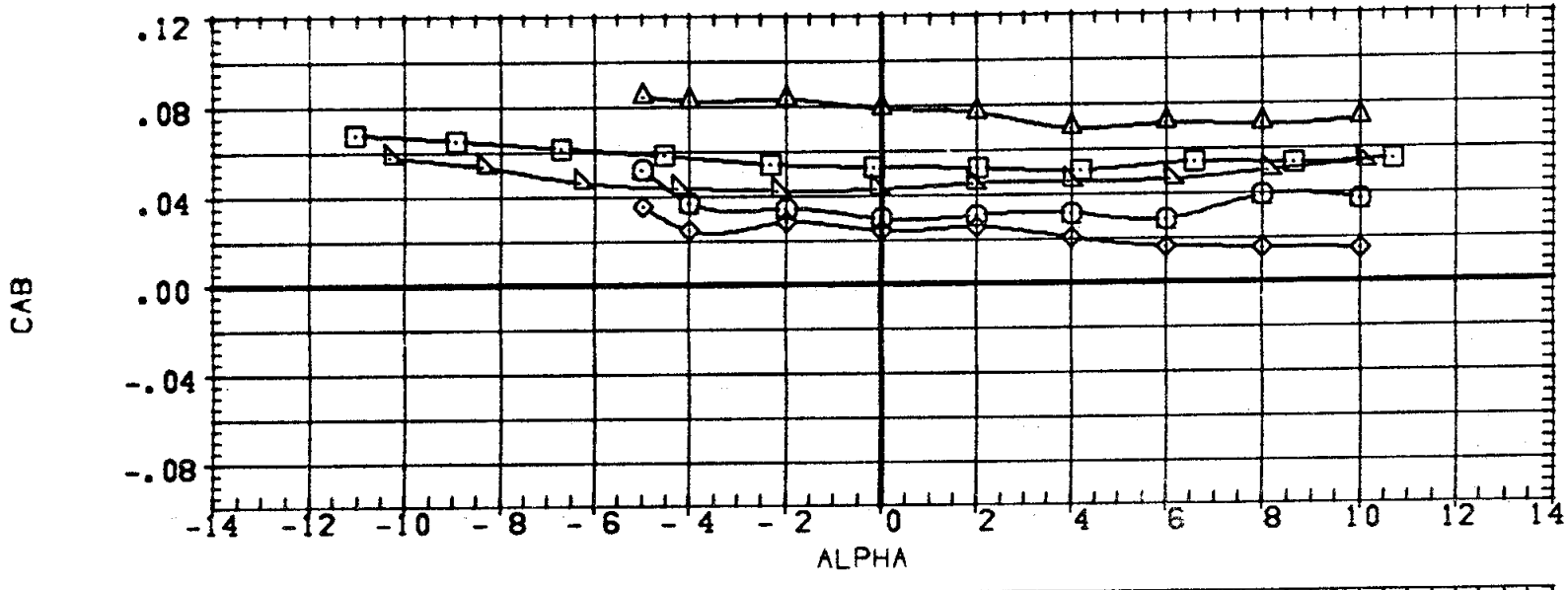


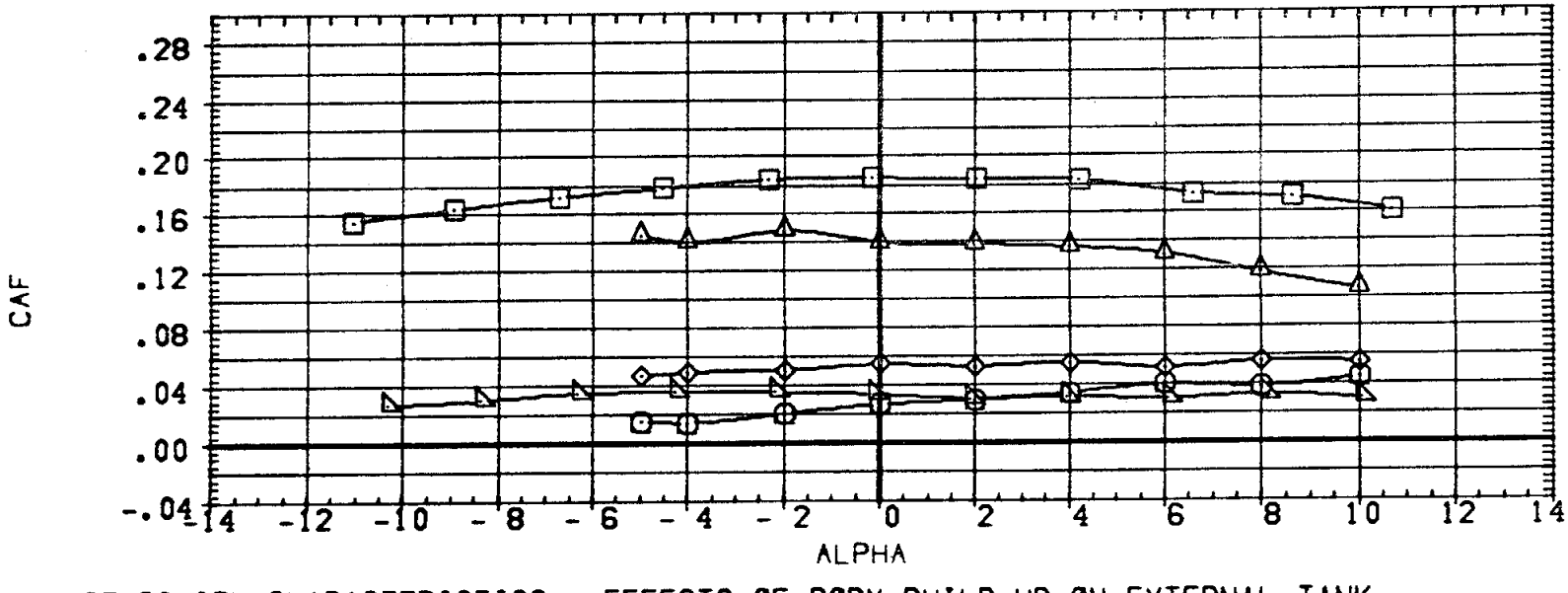
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72110)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(A72117)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	.000
(A72701)		MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				.000
(A72601)		MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

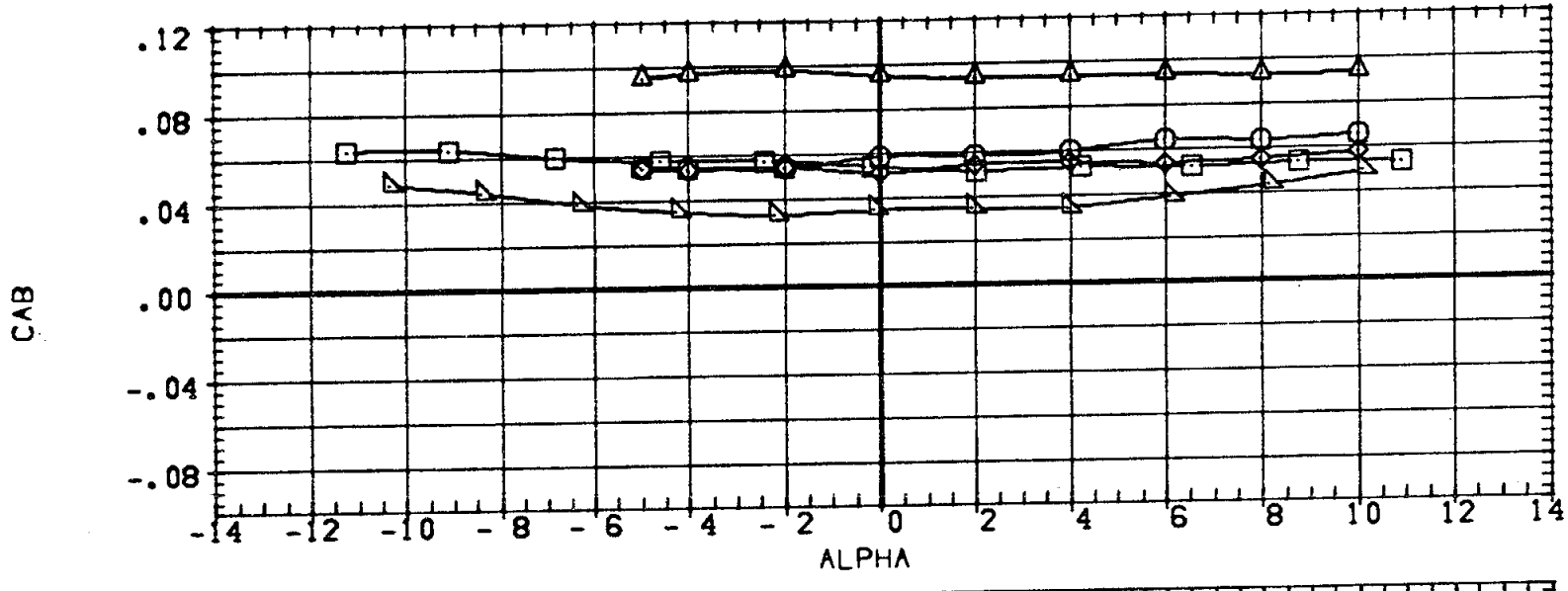
(D)MACH = .99

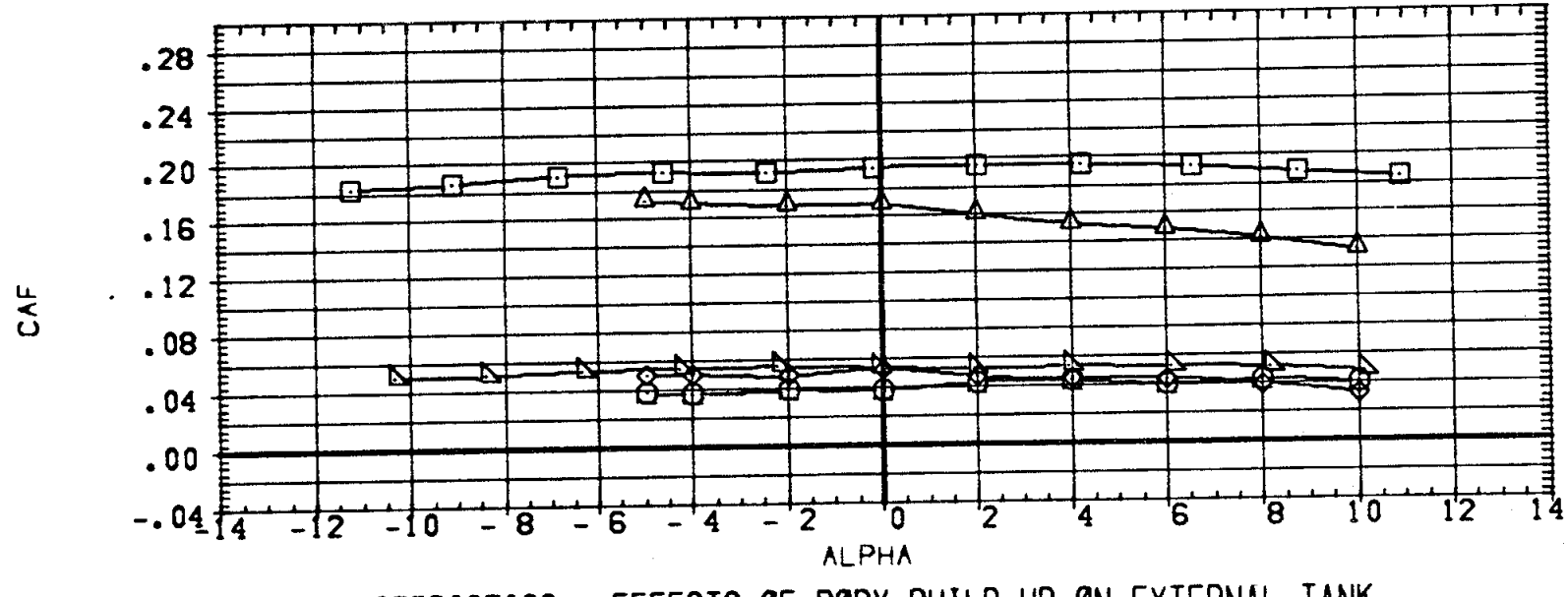
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC S4S (IA1) MOD ATP LV-(T3)/(O1)
(A72110)	◇	MSFC S4S (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72119)	□	MSFC S4S (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	△	MSFC S4S (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC S4S (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



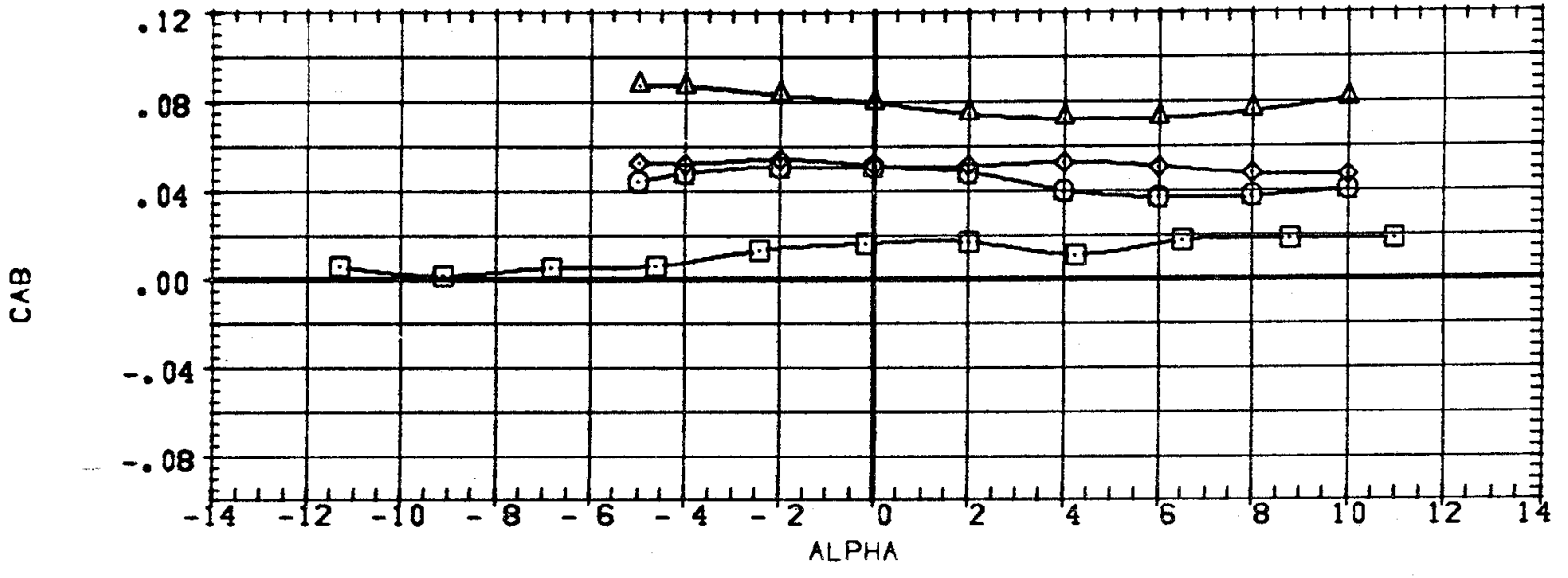


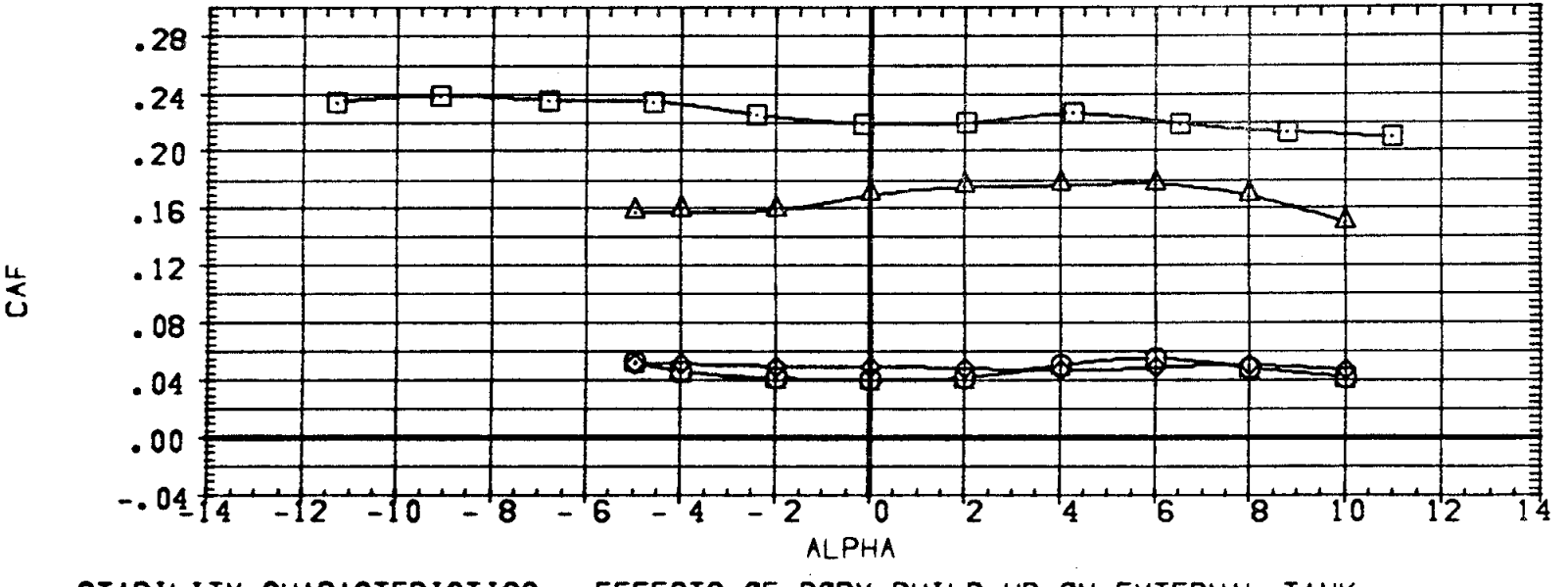
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(E)MACH = 1.19

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72110)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	.000
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	.000
(A72701)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				.000

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

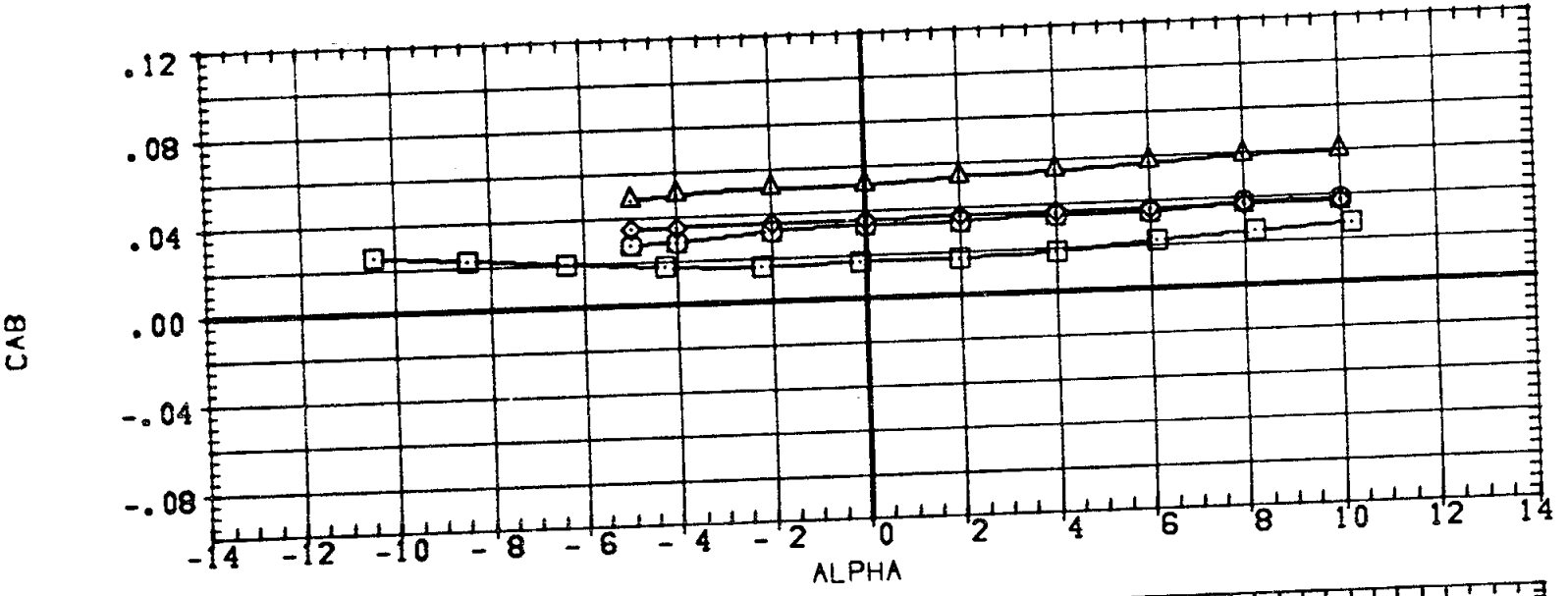
(F)MACH = 1.46

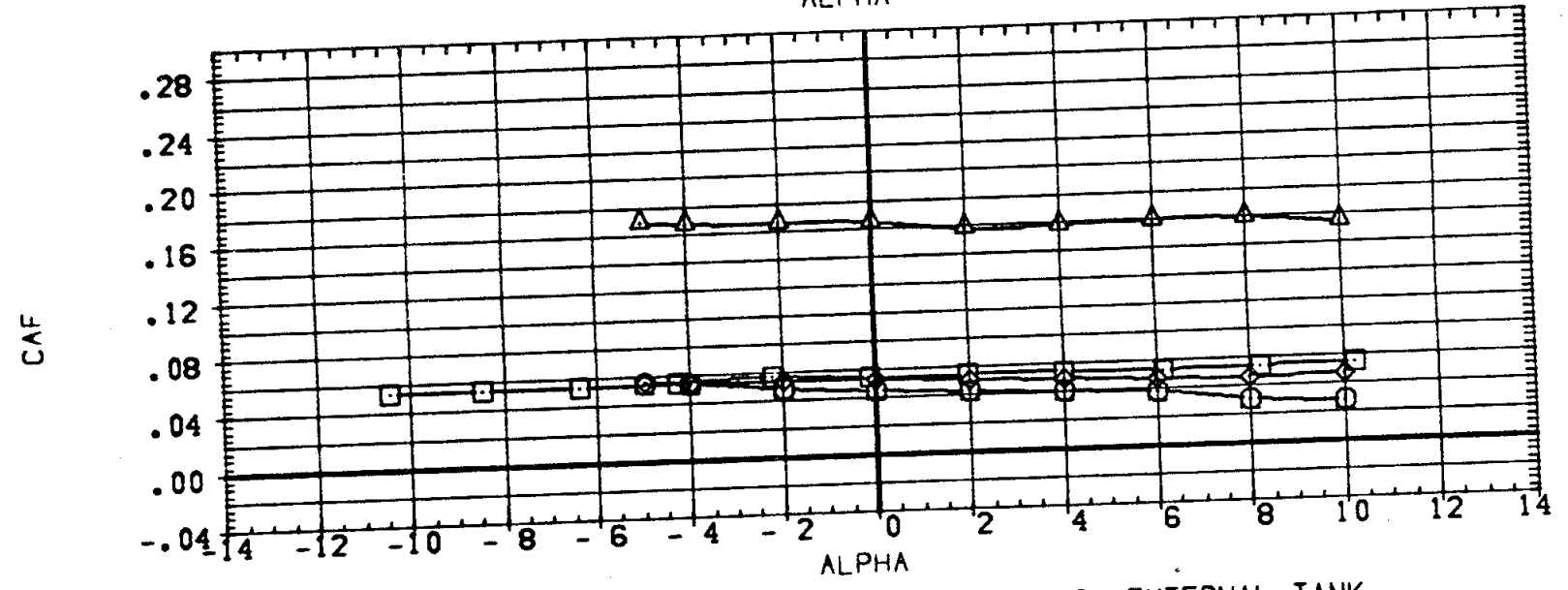
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	MSFC 545 (1A1) MOD ATP LV-(T3)/(O1)
(A72110)	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)
(A72117)	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	MSFC 545 (1A1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



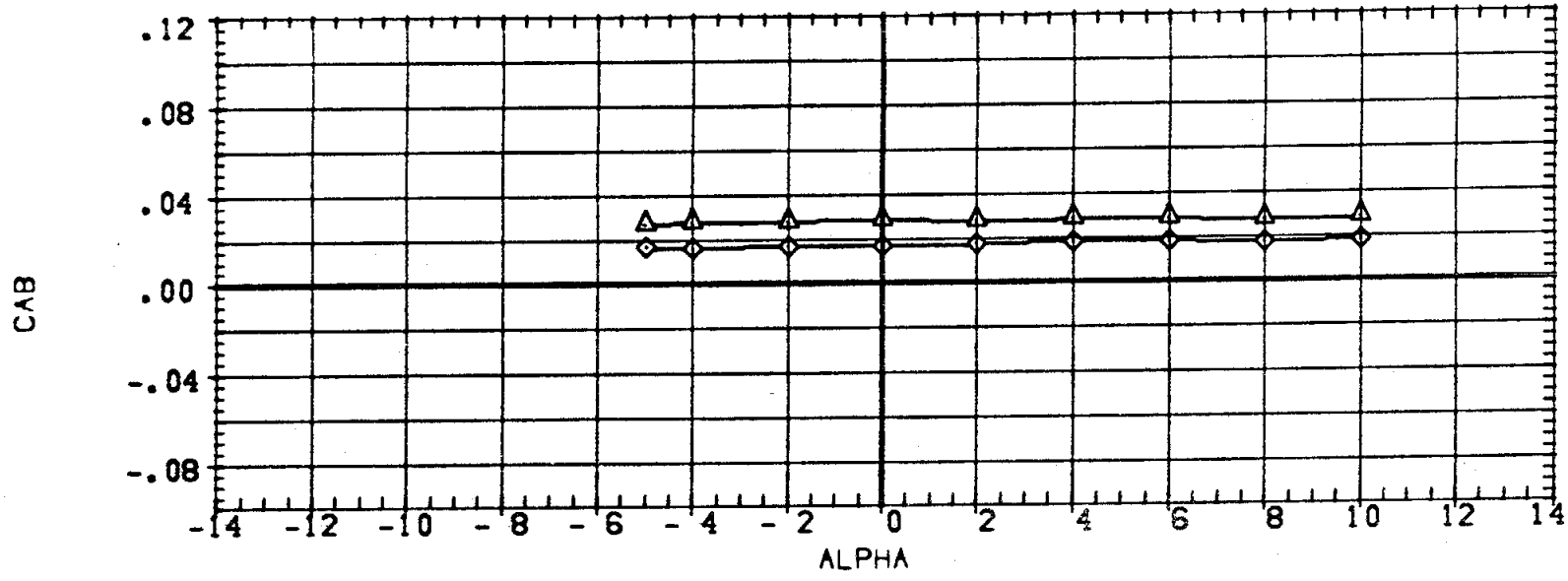


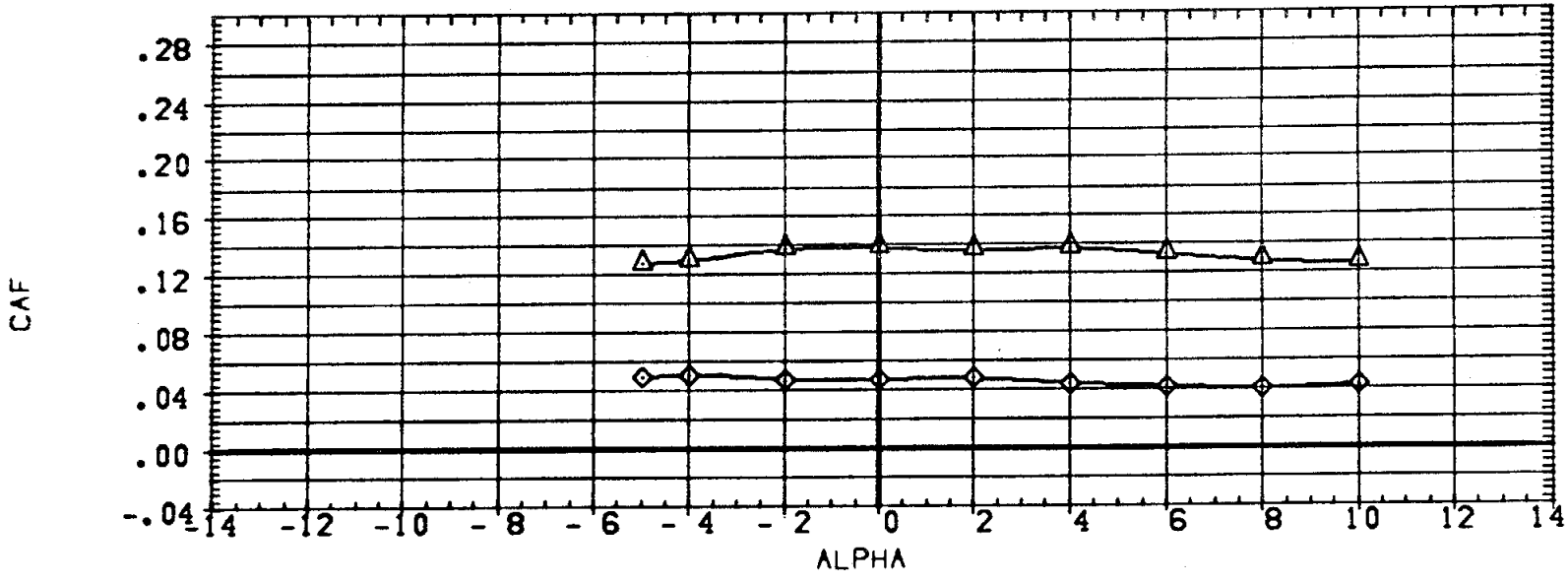
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(G)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)		DATA NOT AVAILABLE	1.500	.120	10.000	
(A72110)		MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	1.500	.120	10.000	.000
(A72117)		MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	1.500	.120	10.000	.000
(A72701)		DATA NOT AVAILABLE				.000
(A72601)		DATA NOT AVAILABLE				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

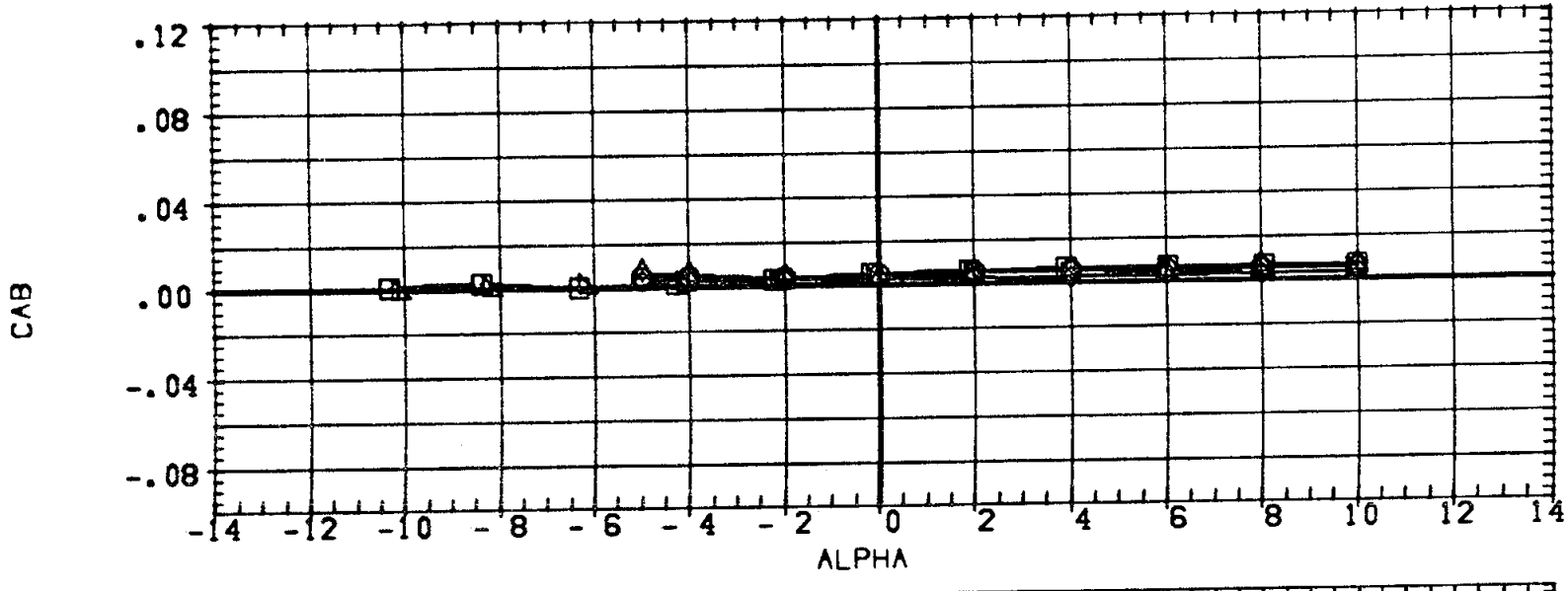
(H)MACH = 2.99

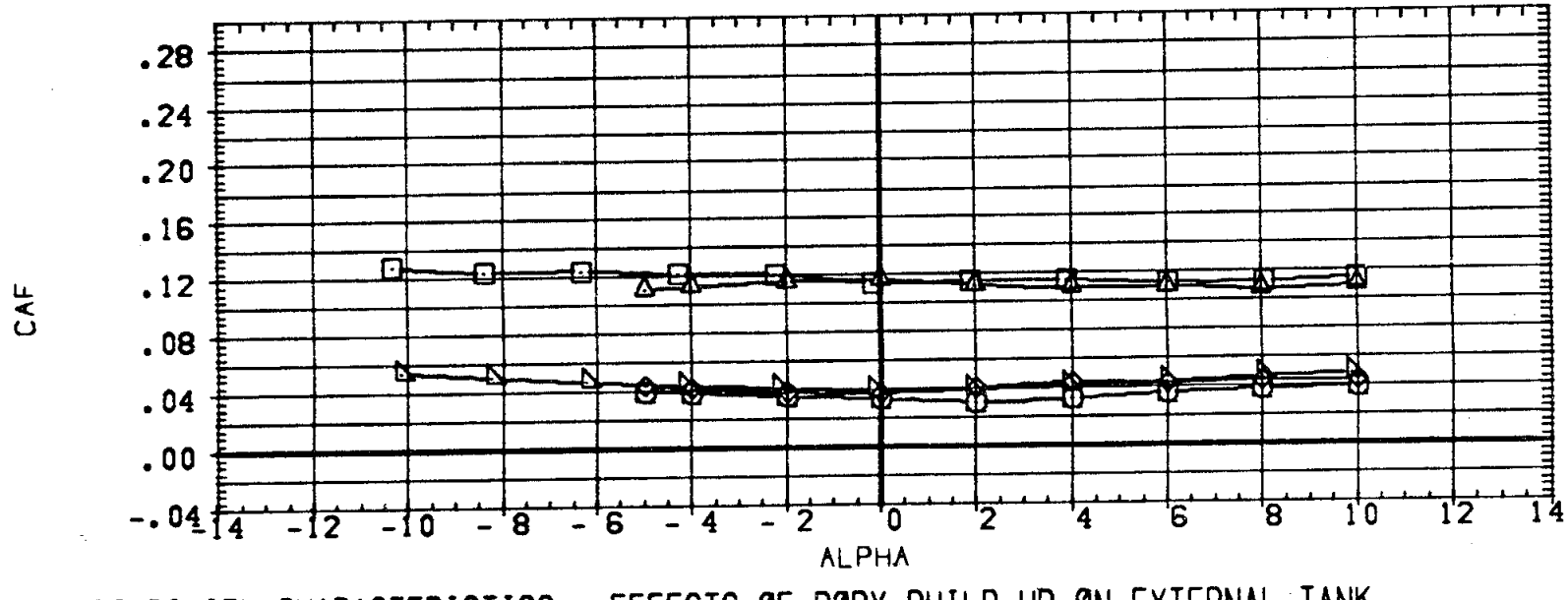
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72110)	□	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72117)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72701)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72601)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	.000
1.500	.120	10.000	.000
			.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

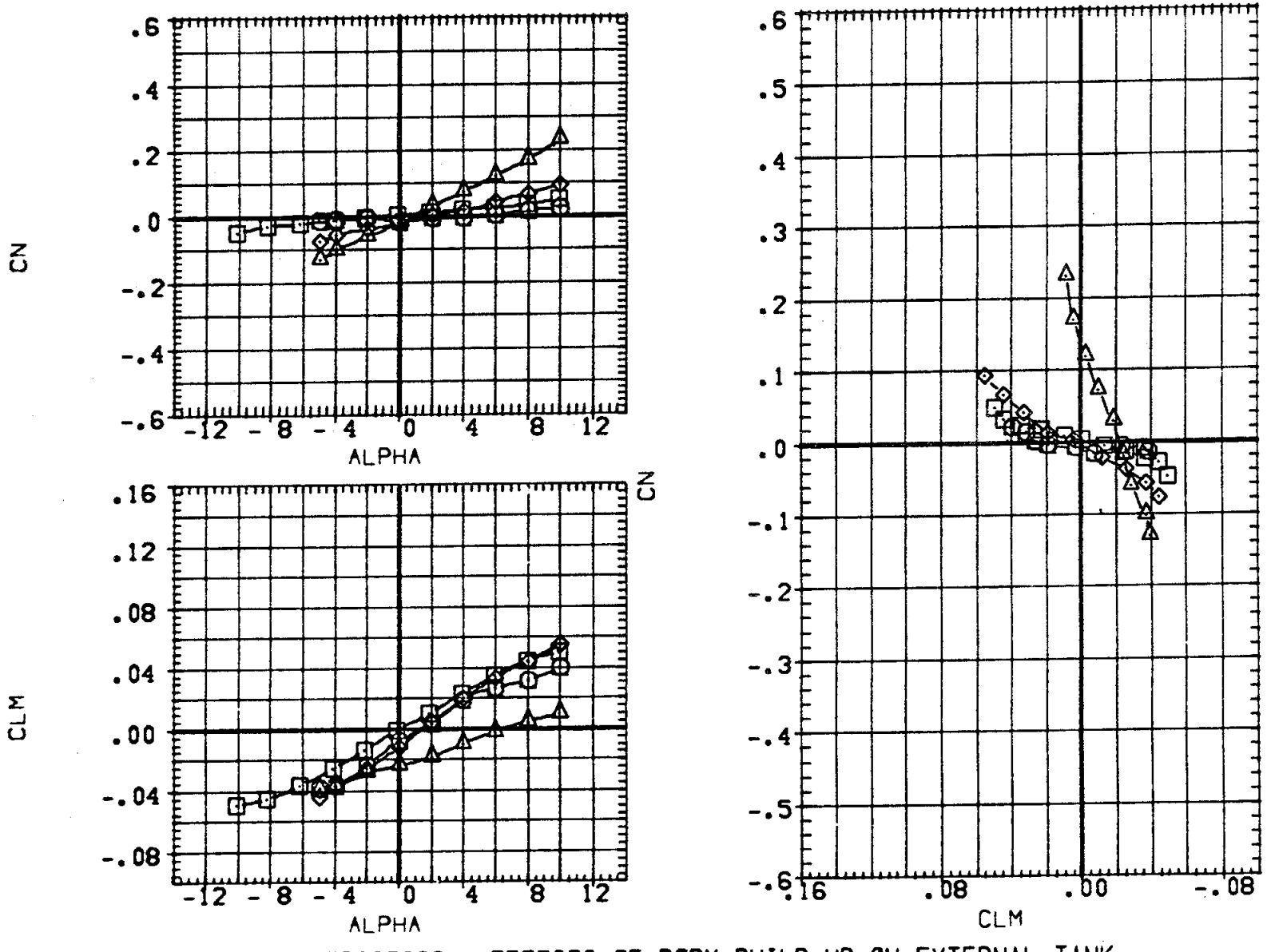
(I)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



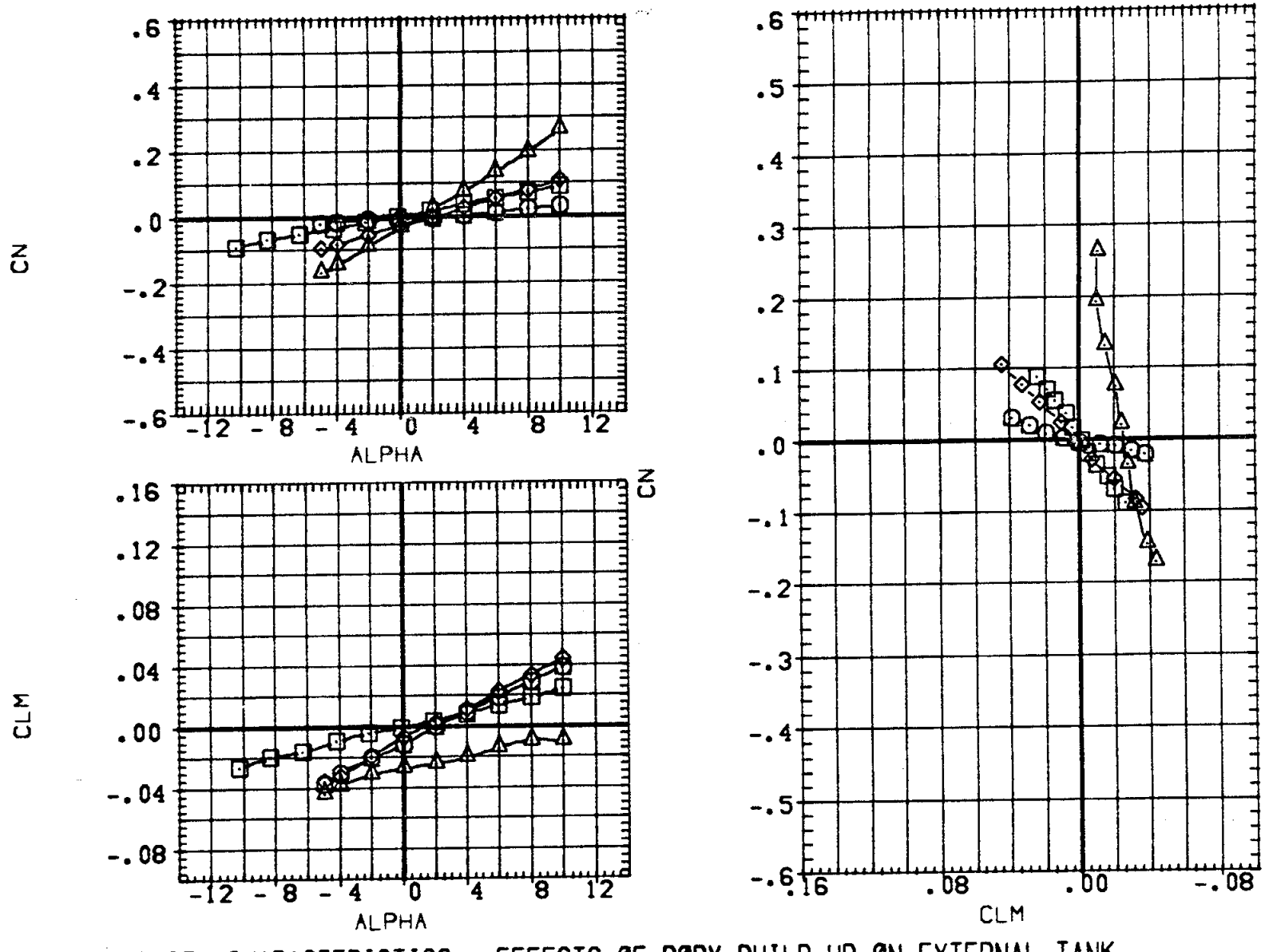
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1320.0000	IN.
BREF	1320.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



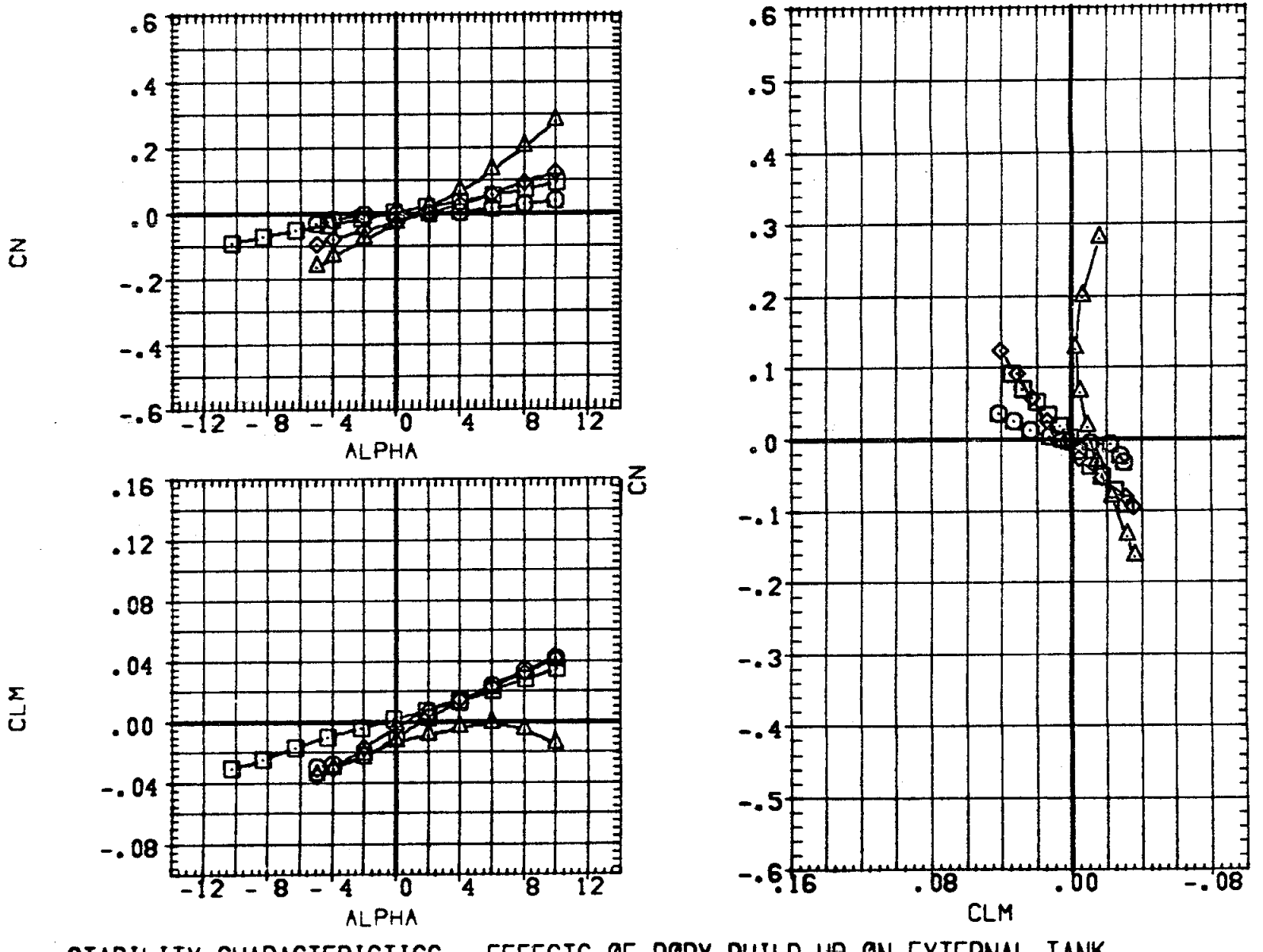
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



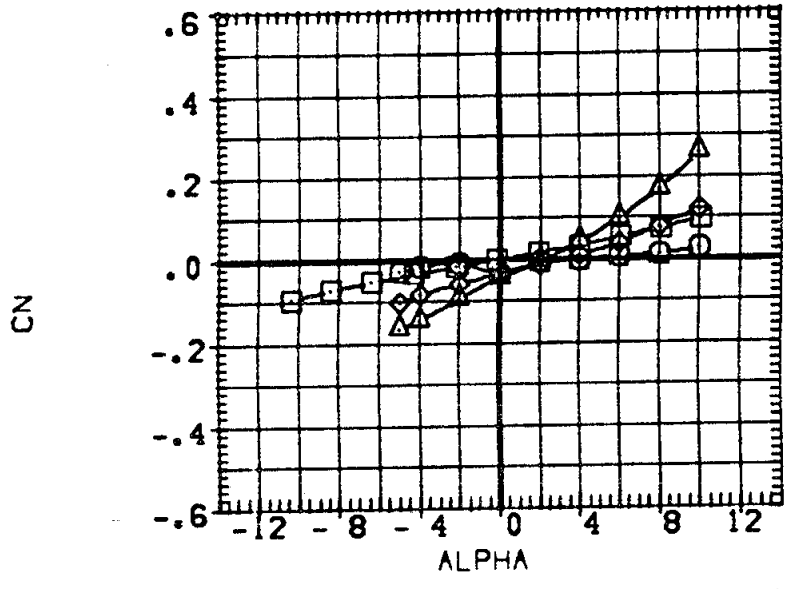
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

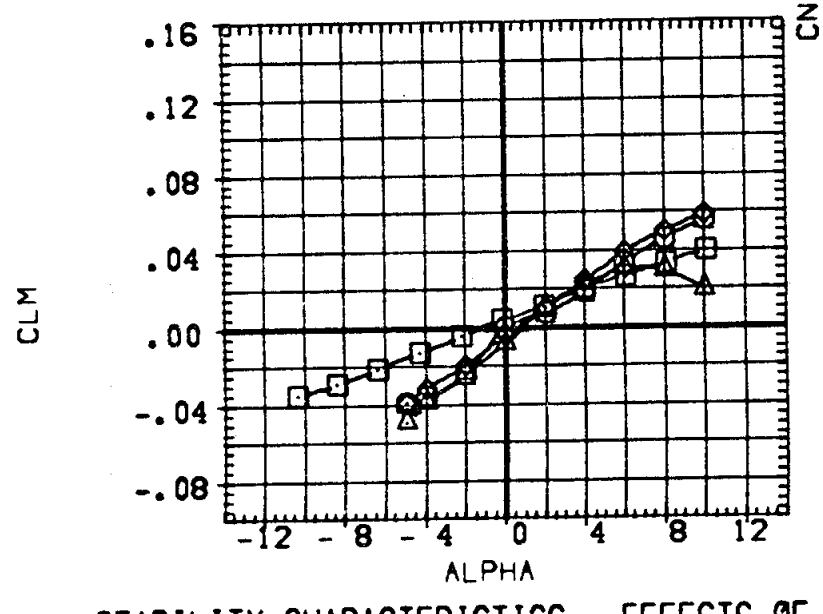
(C)MACH = 1.00

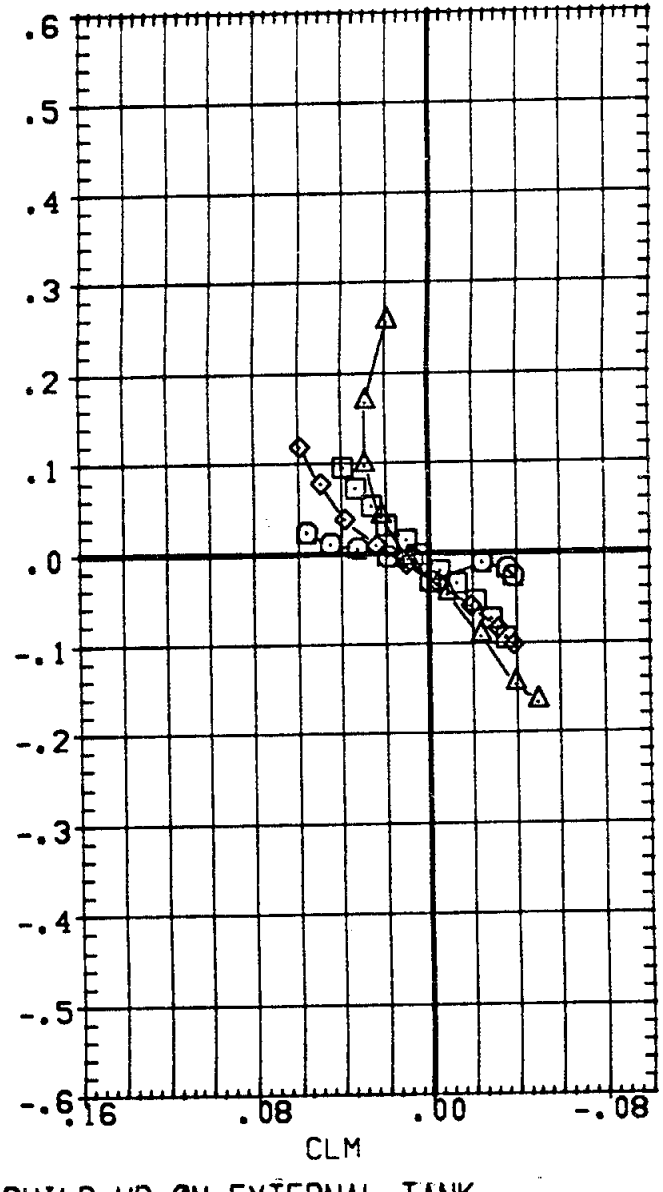
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(AP2122)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(AP2129)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDPLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







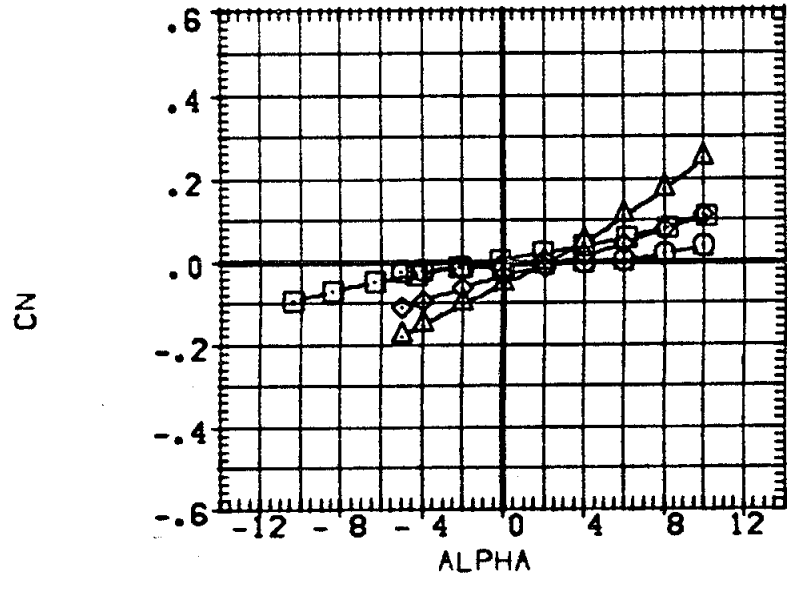
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

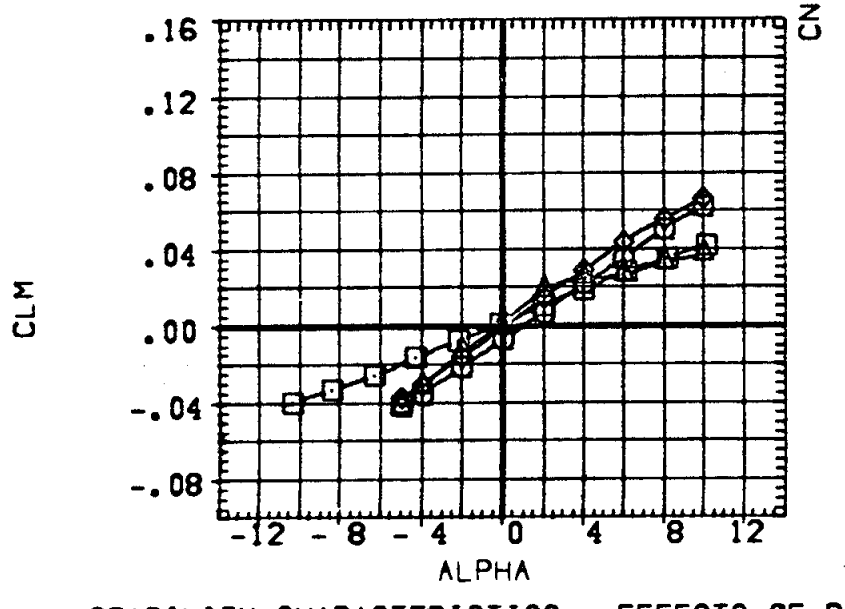
(D)MACH = 1.21

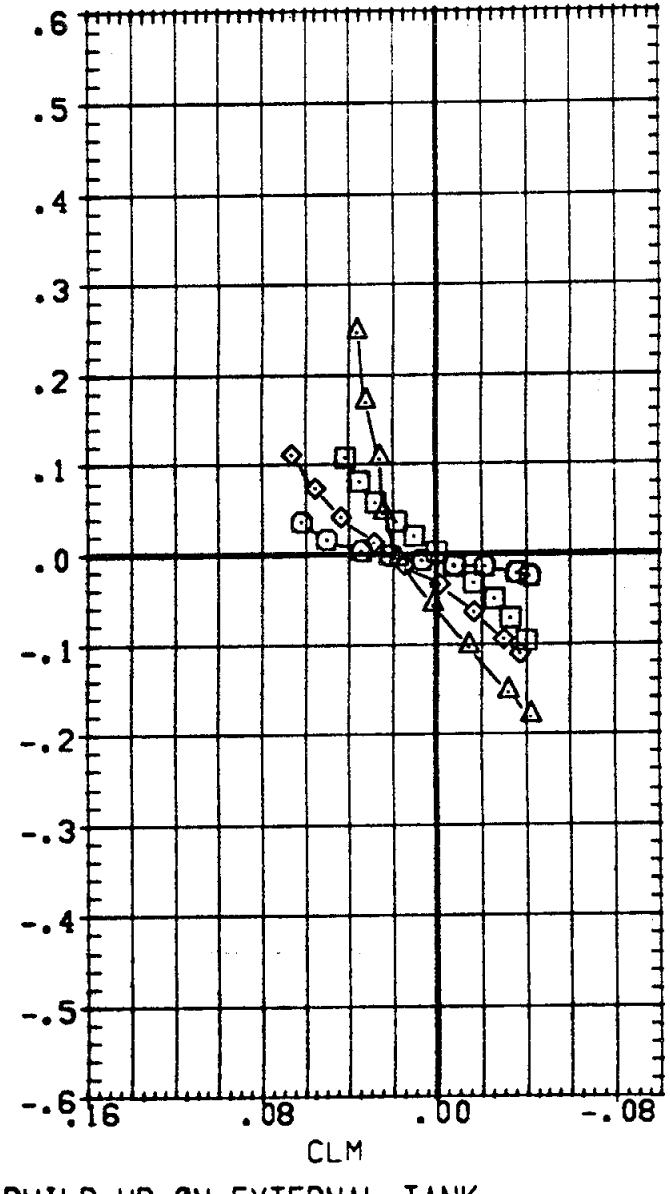
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC S4S (IA1) MOD ATP LV-(T3)/(O1)
(A72122)	△	MSFC S4S (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72129)	◇	MSFC S4S (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC S4S (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

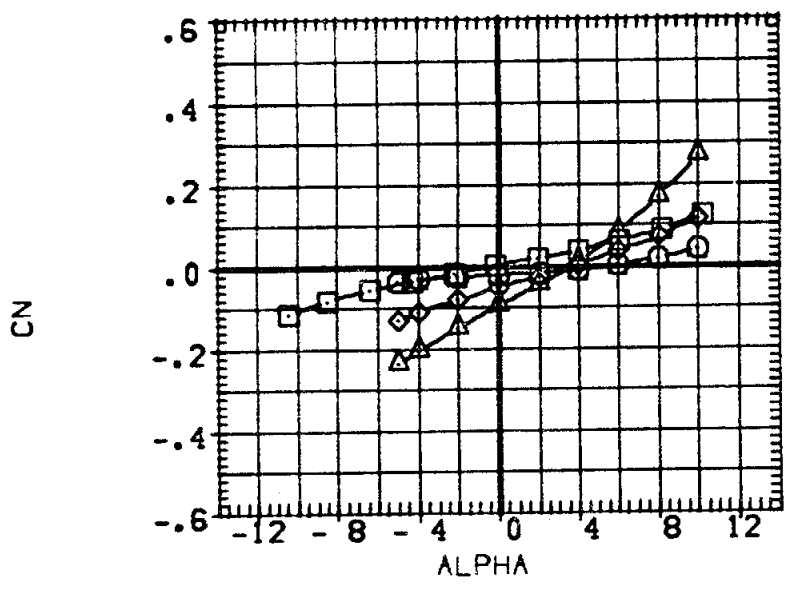
(E)MACH = 1.46

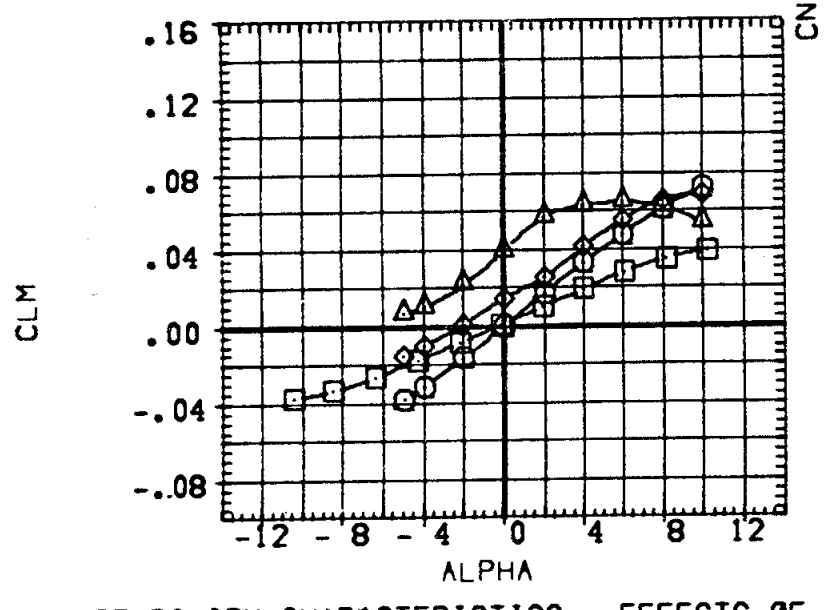
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

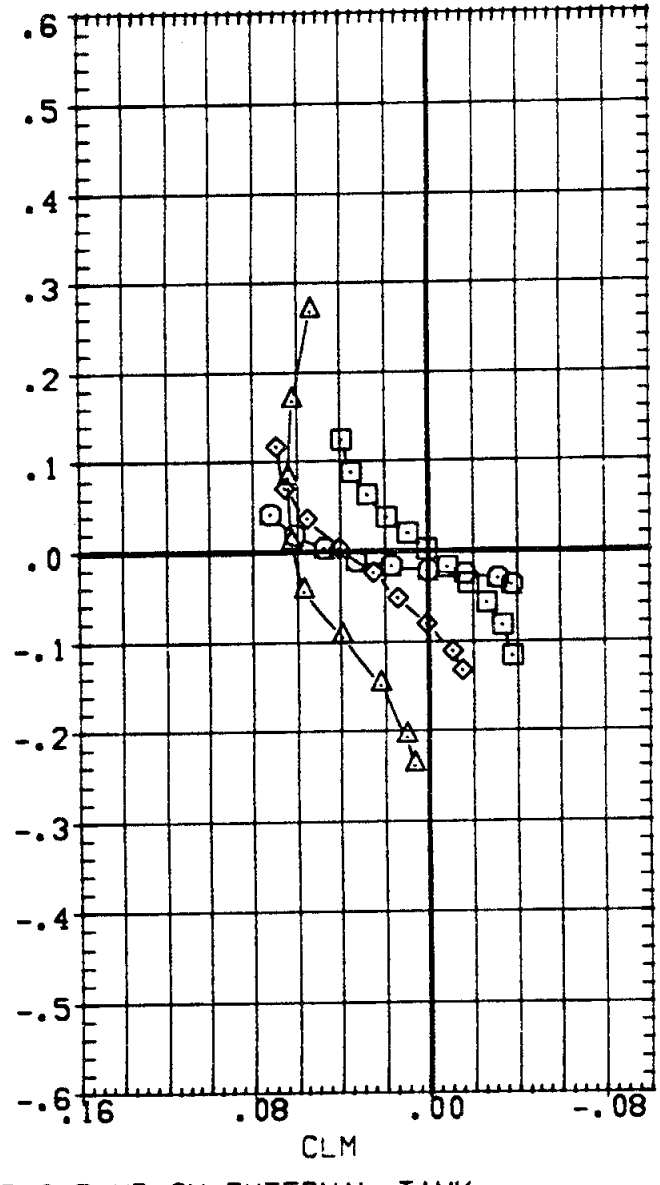
ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







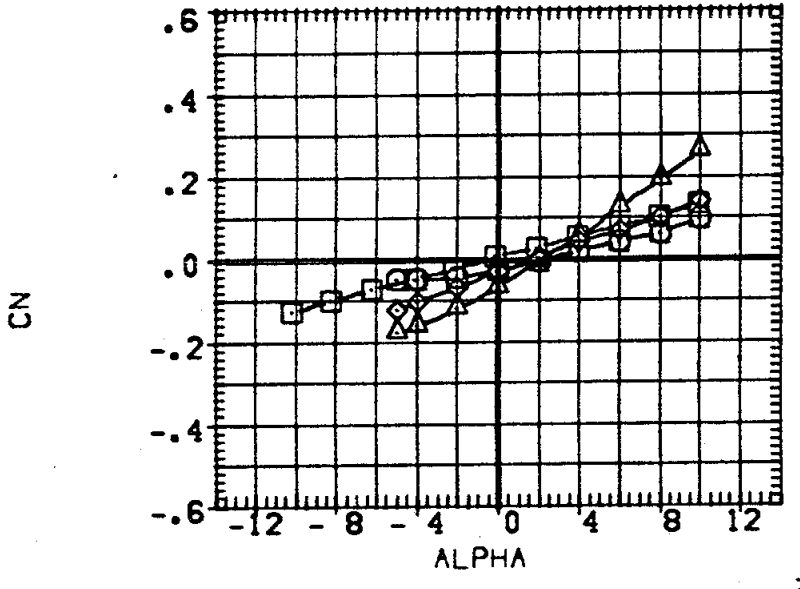
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

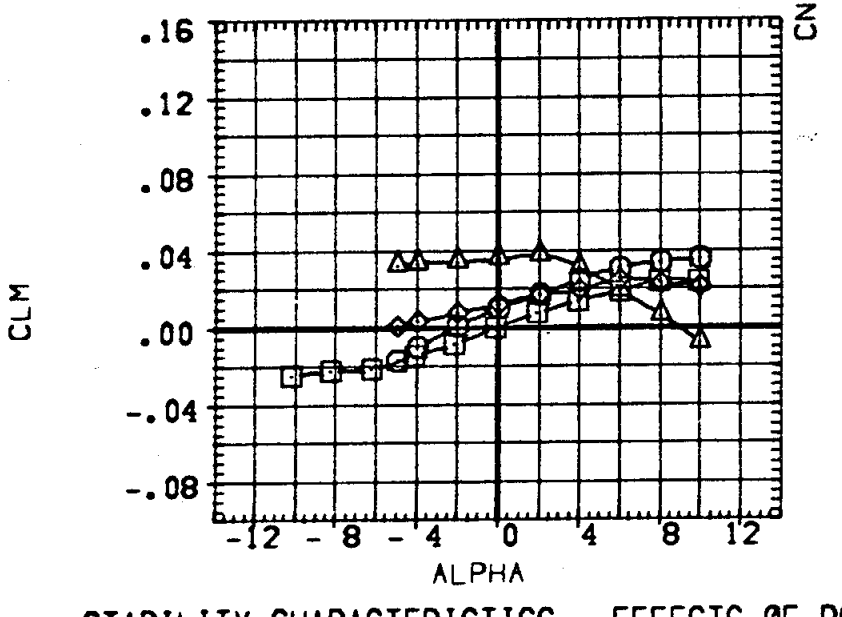
(F)MACH = 1.95

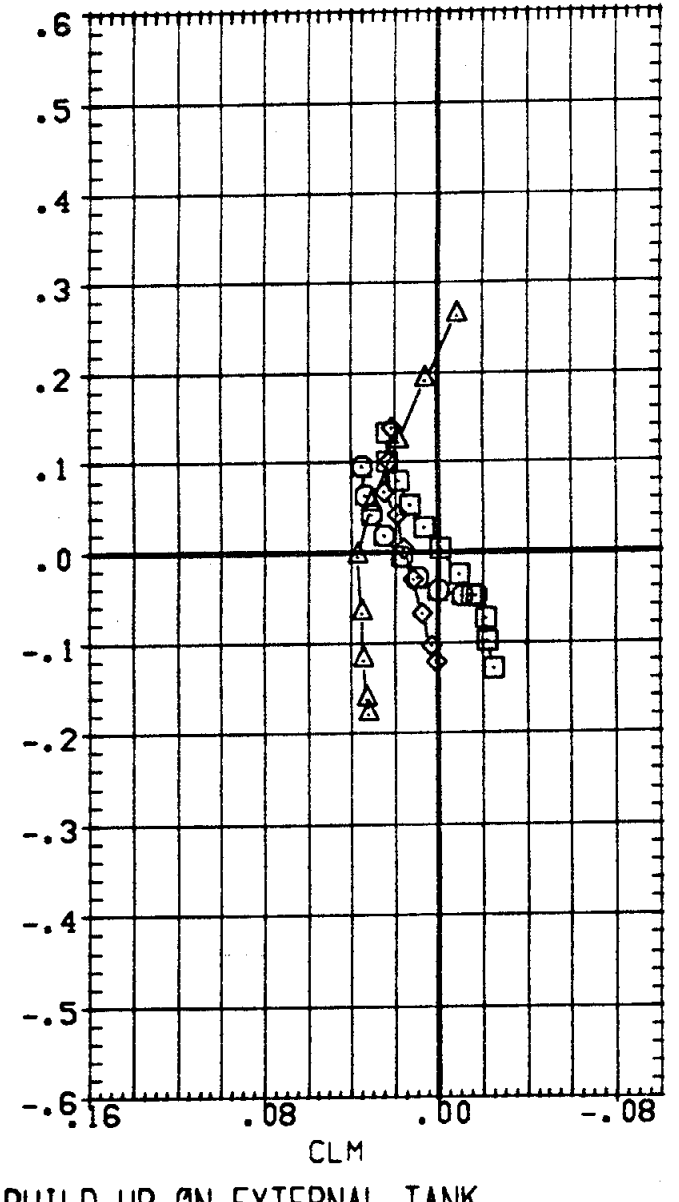
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

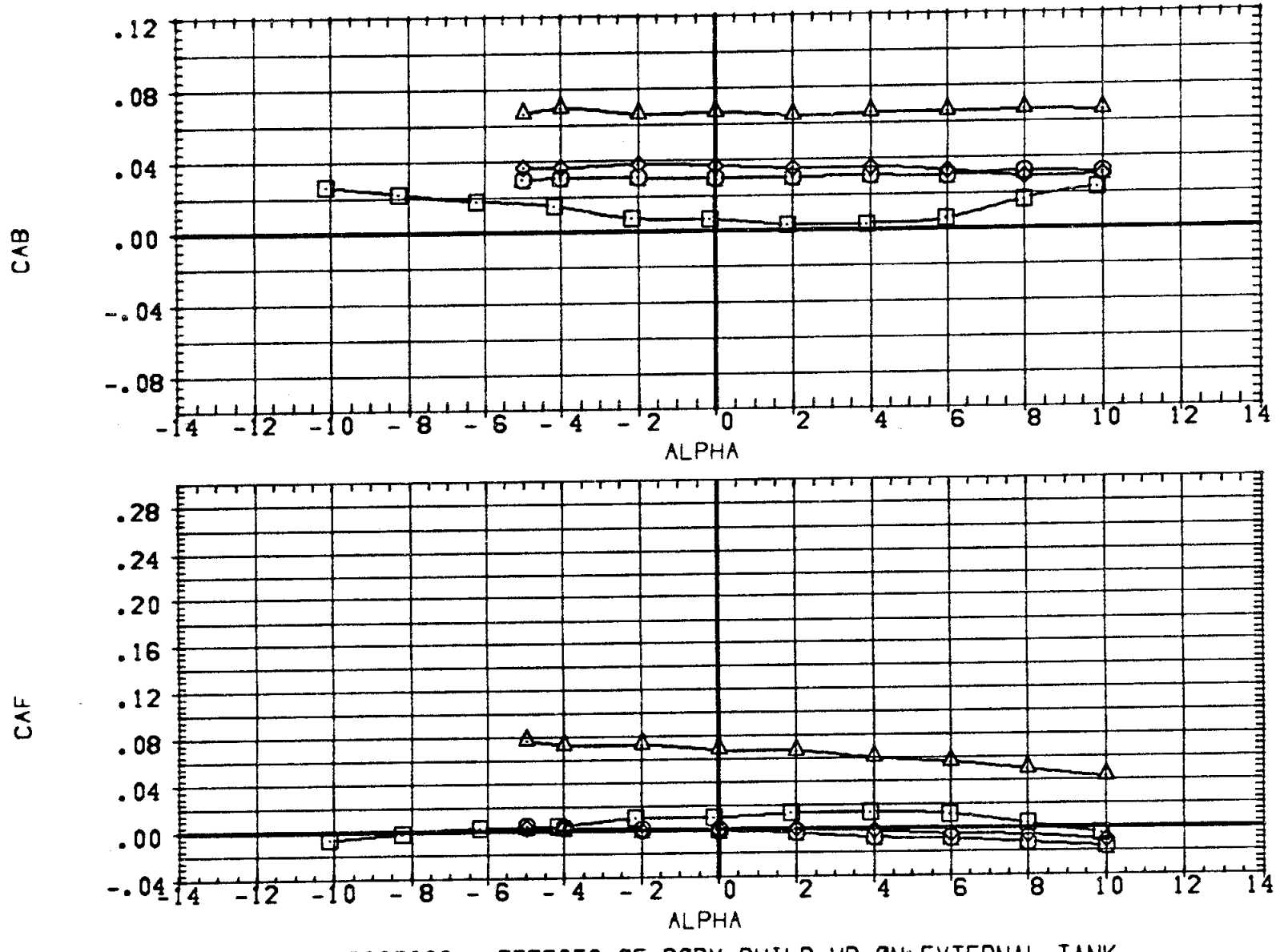
(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

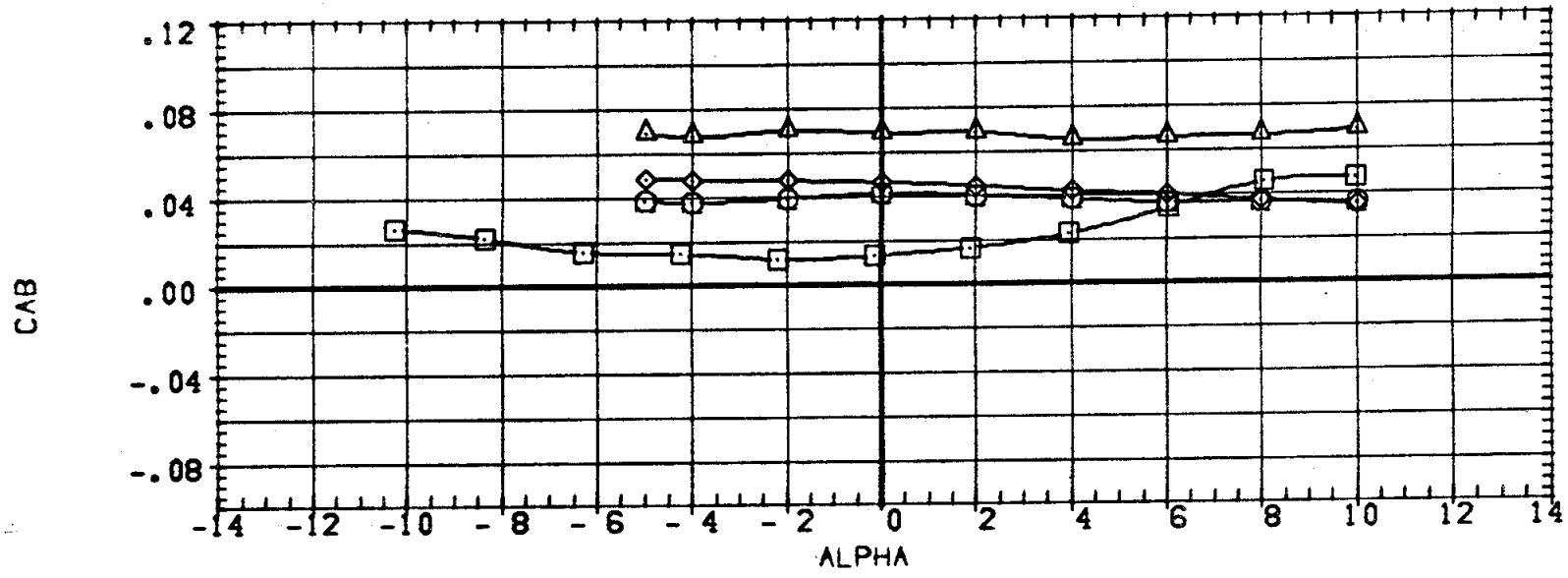
(A)MACH = .60

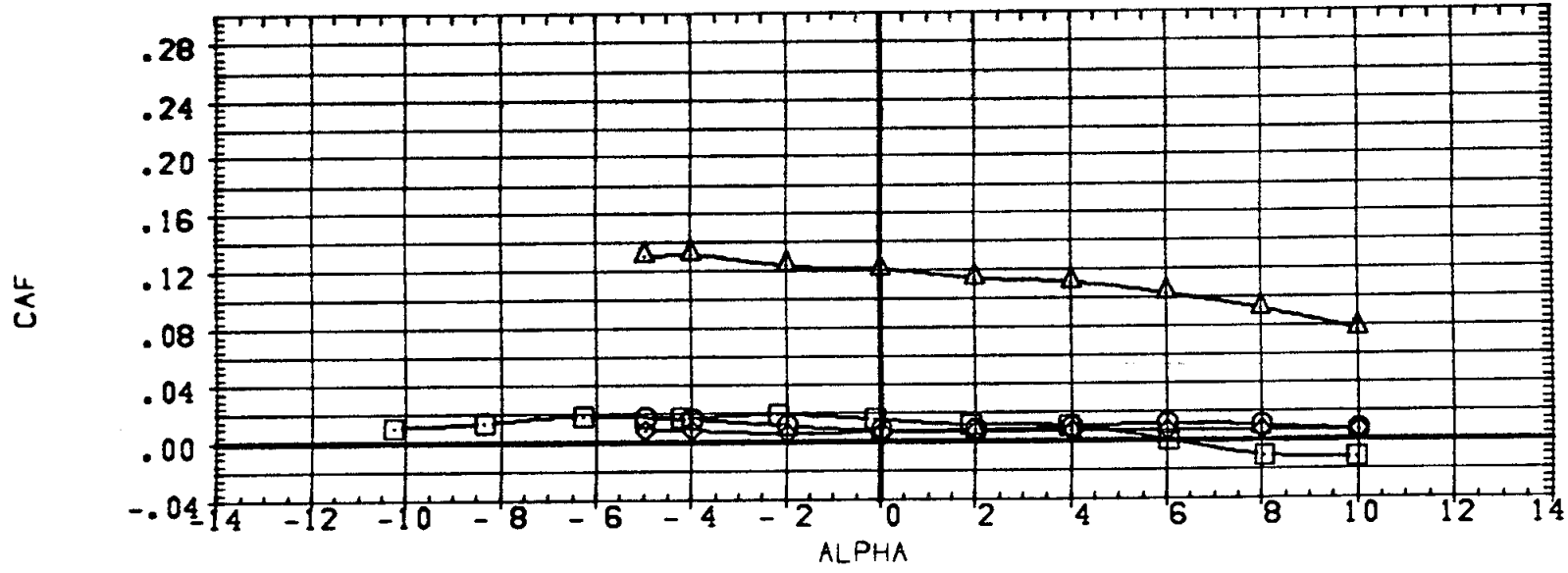
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

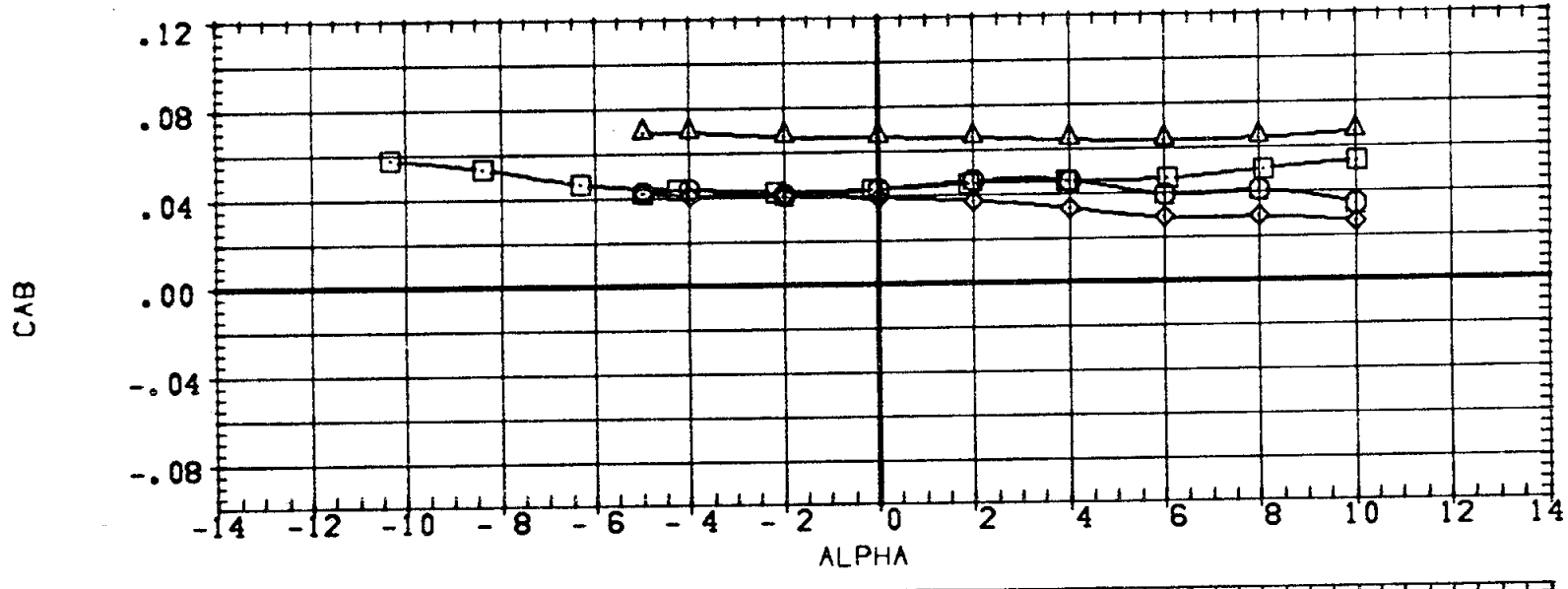
(B)MACH = .90

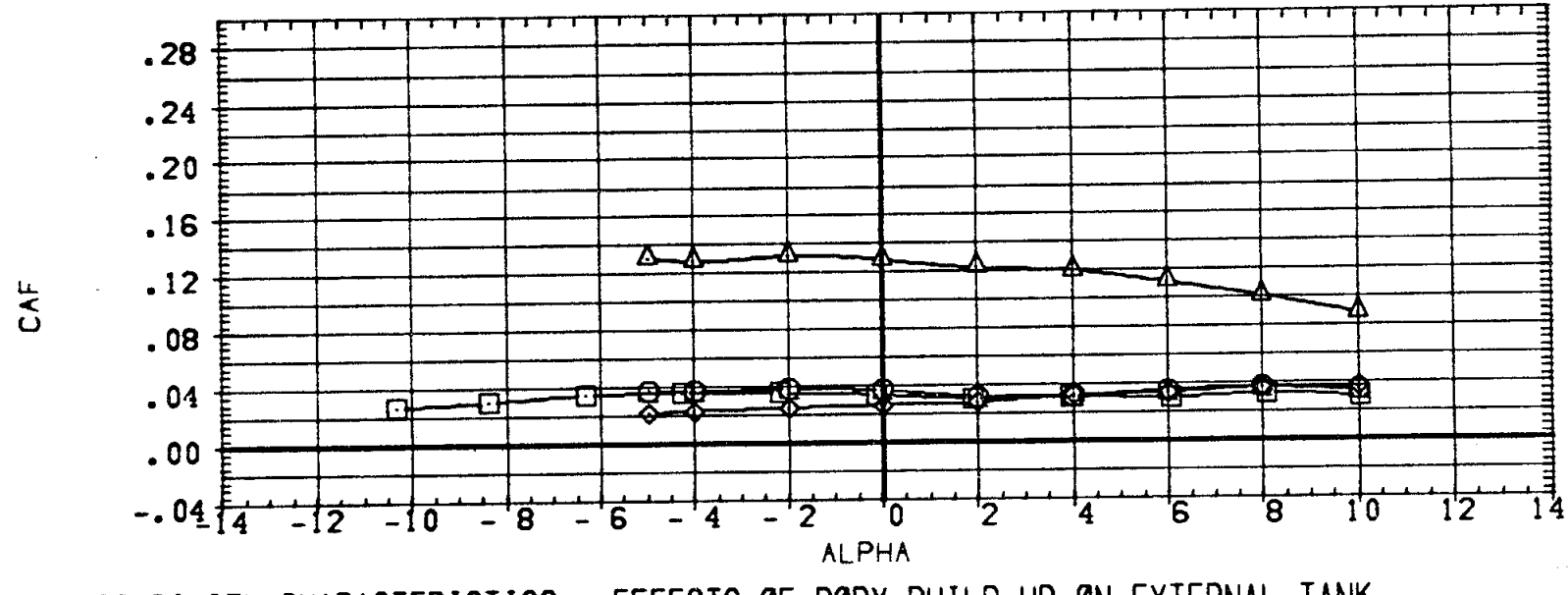
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





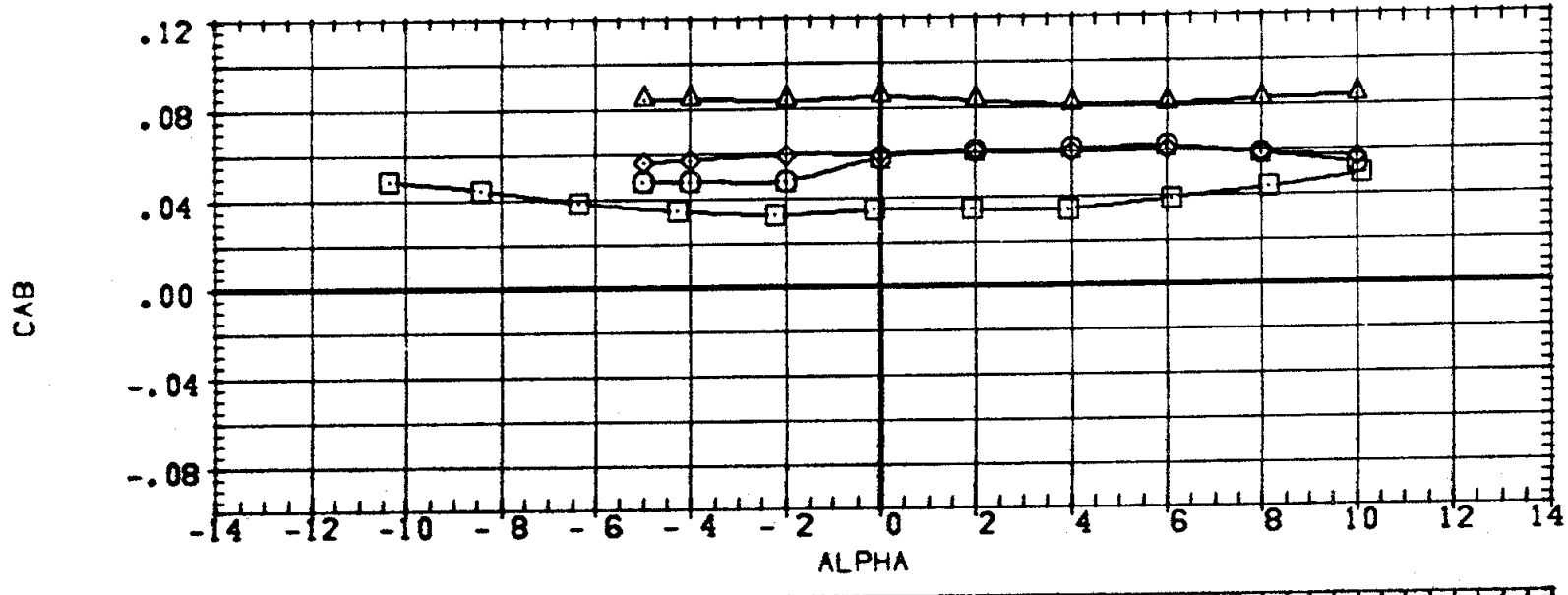
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

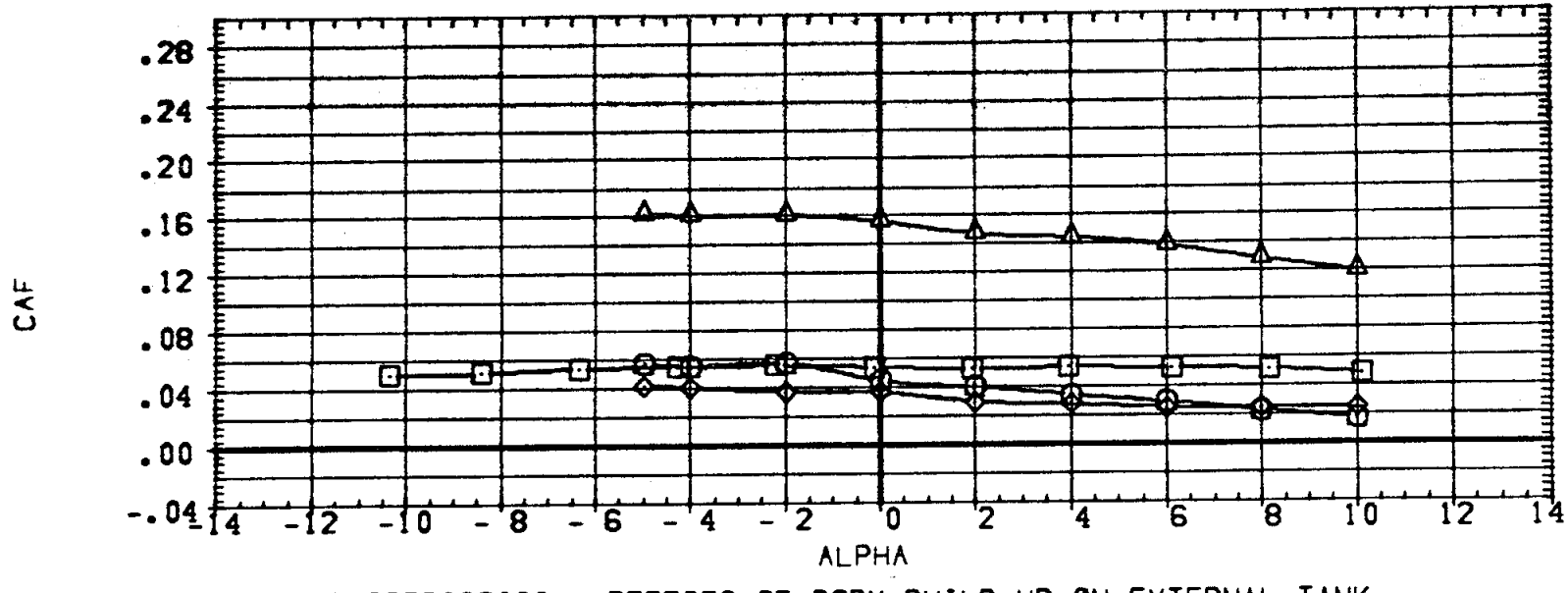
(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
.000	.120	10.000	
.000	.120	10.000	-.624
.000	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





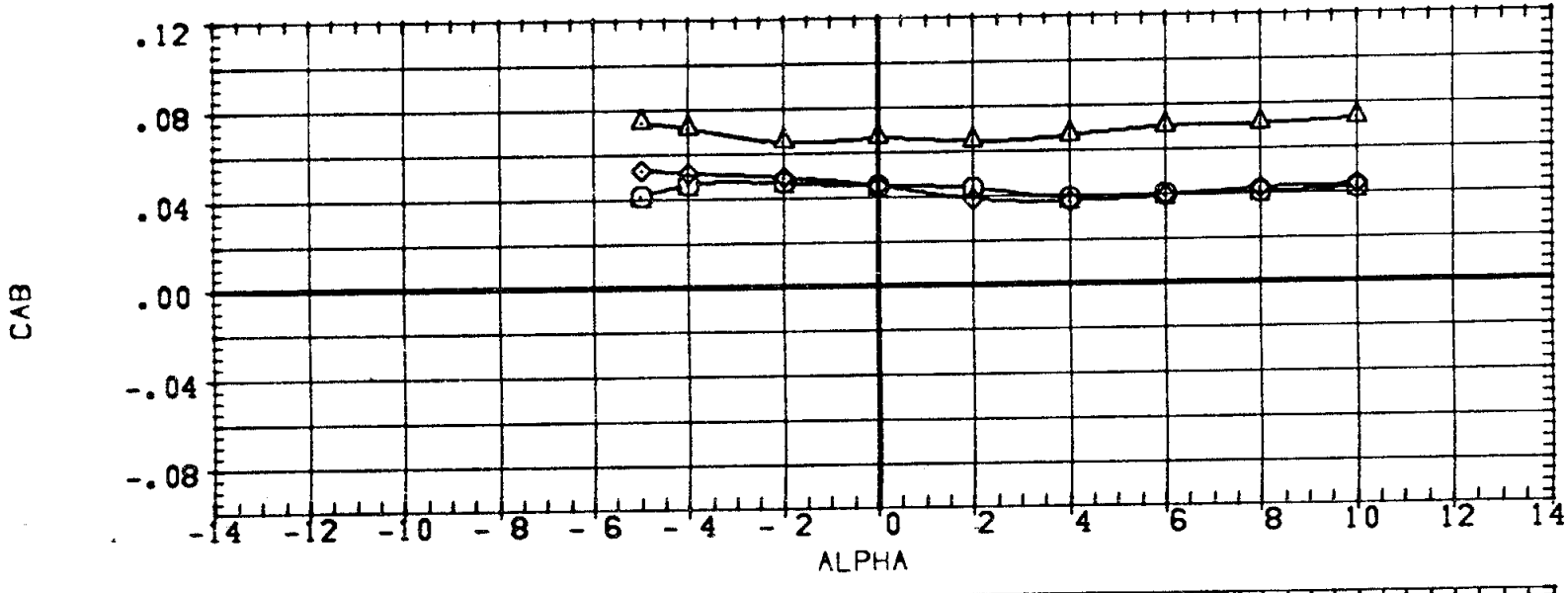
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

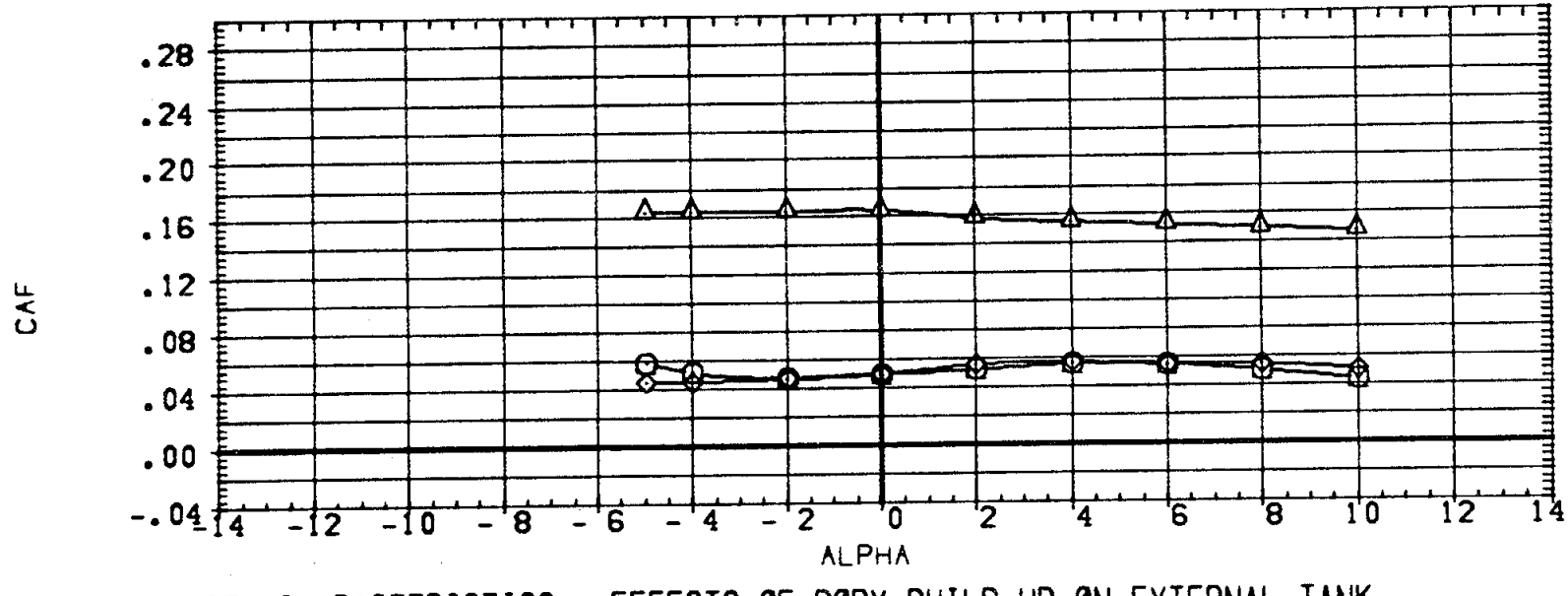
(□)MACH = 1.21

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)	.000	.120	10.000	
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	.000	.120	10.000	-.624
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	.000	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





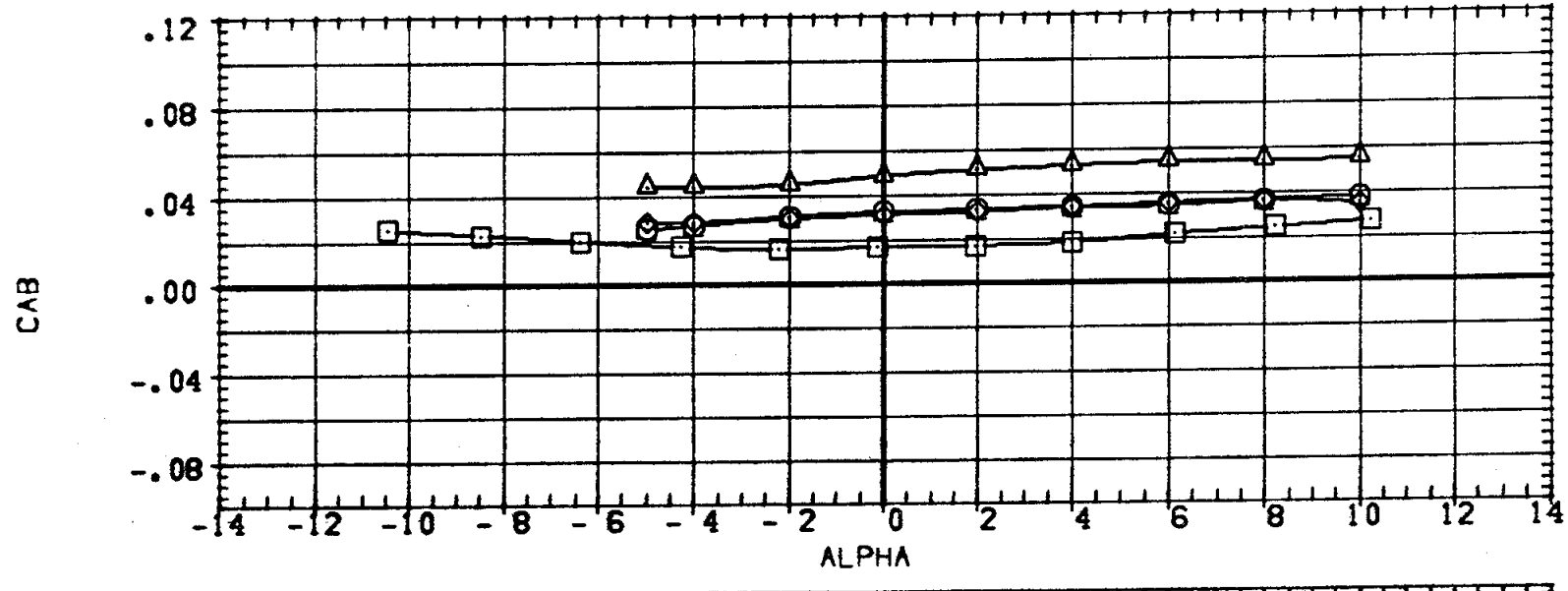
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

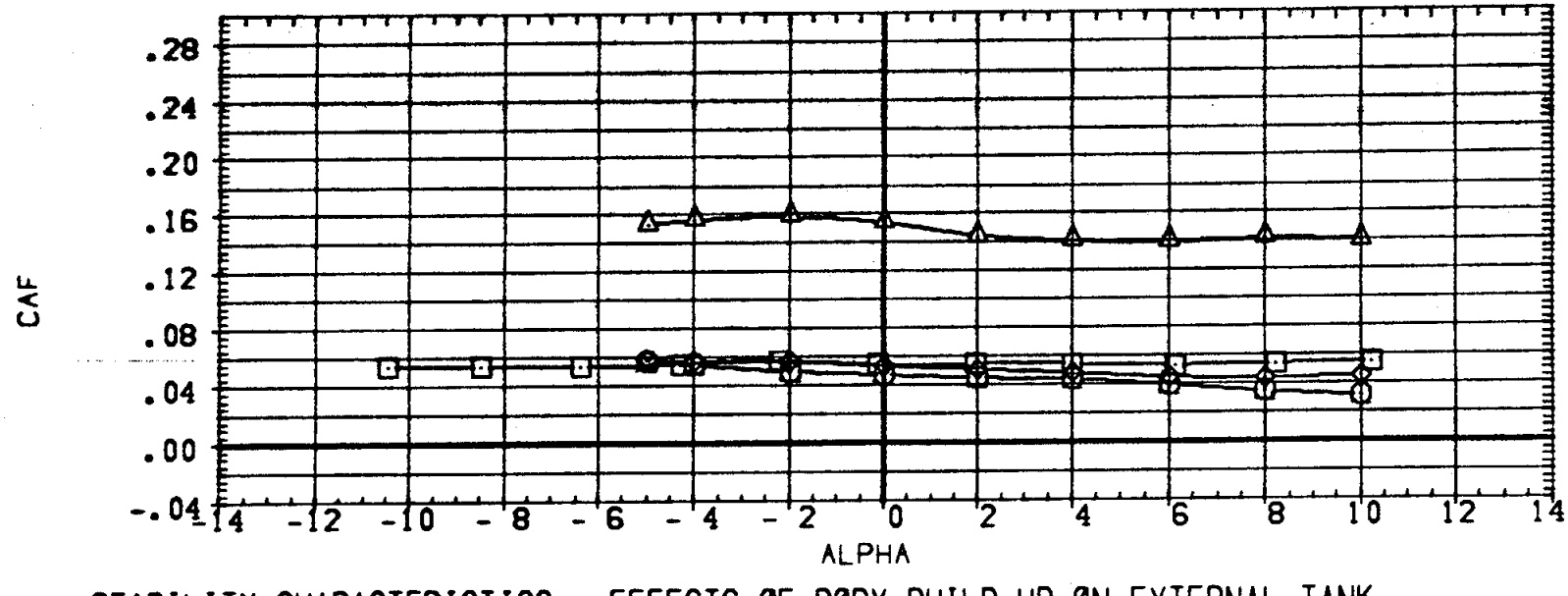
(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72101)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)	.000	.120	10.000	
(A72122)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	.000	.120	10.000	-.624
(A72129)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	.000	.120	10.000	-.624
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





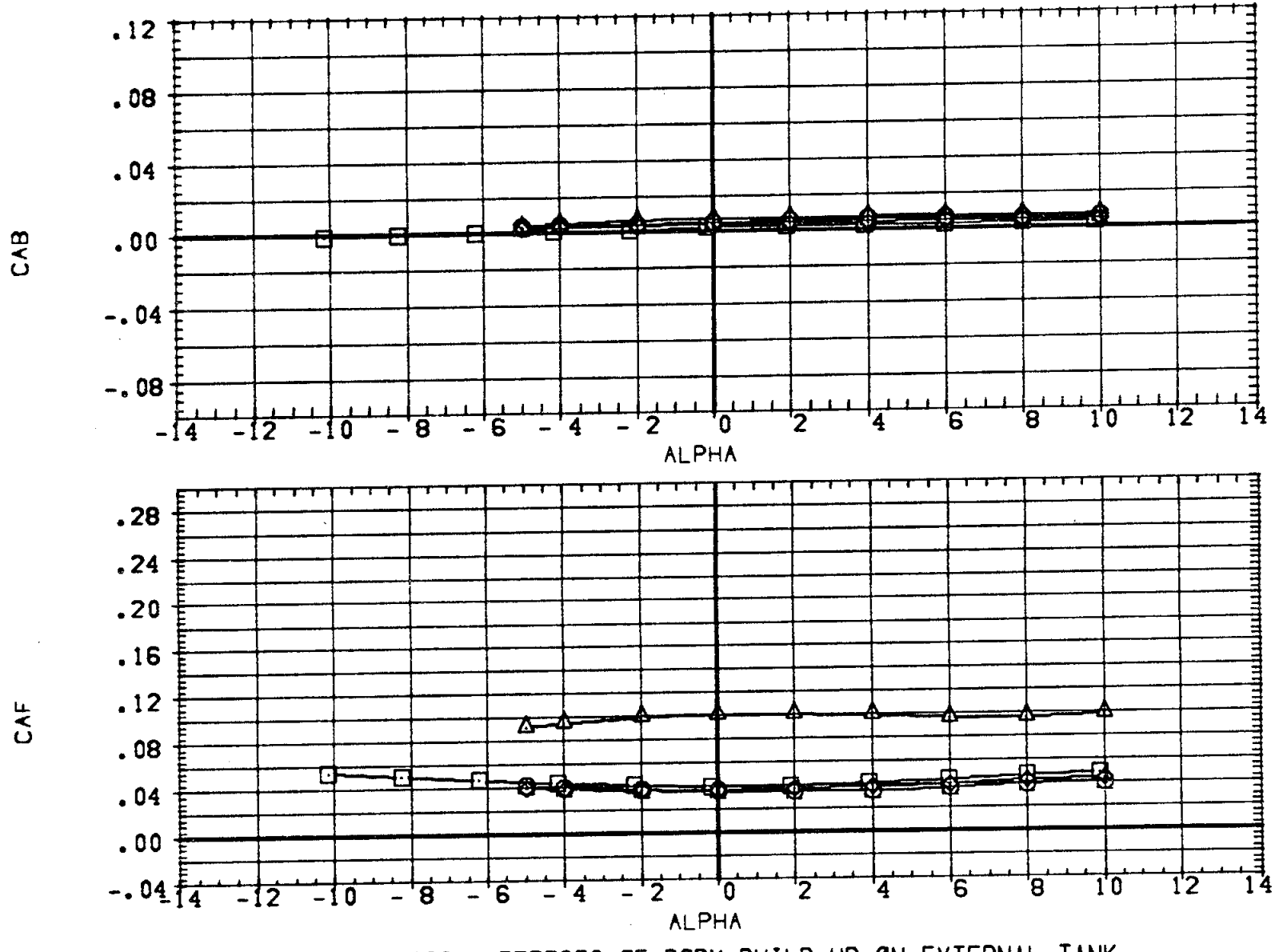
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(F)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2101)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	.000	.120	10.000	
(AY2122)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	.000	.120	10.000	-.624
(AY2129)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	.000	.120	10.000	-.624
(AY2601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

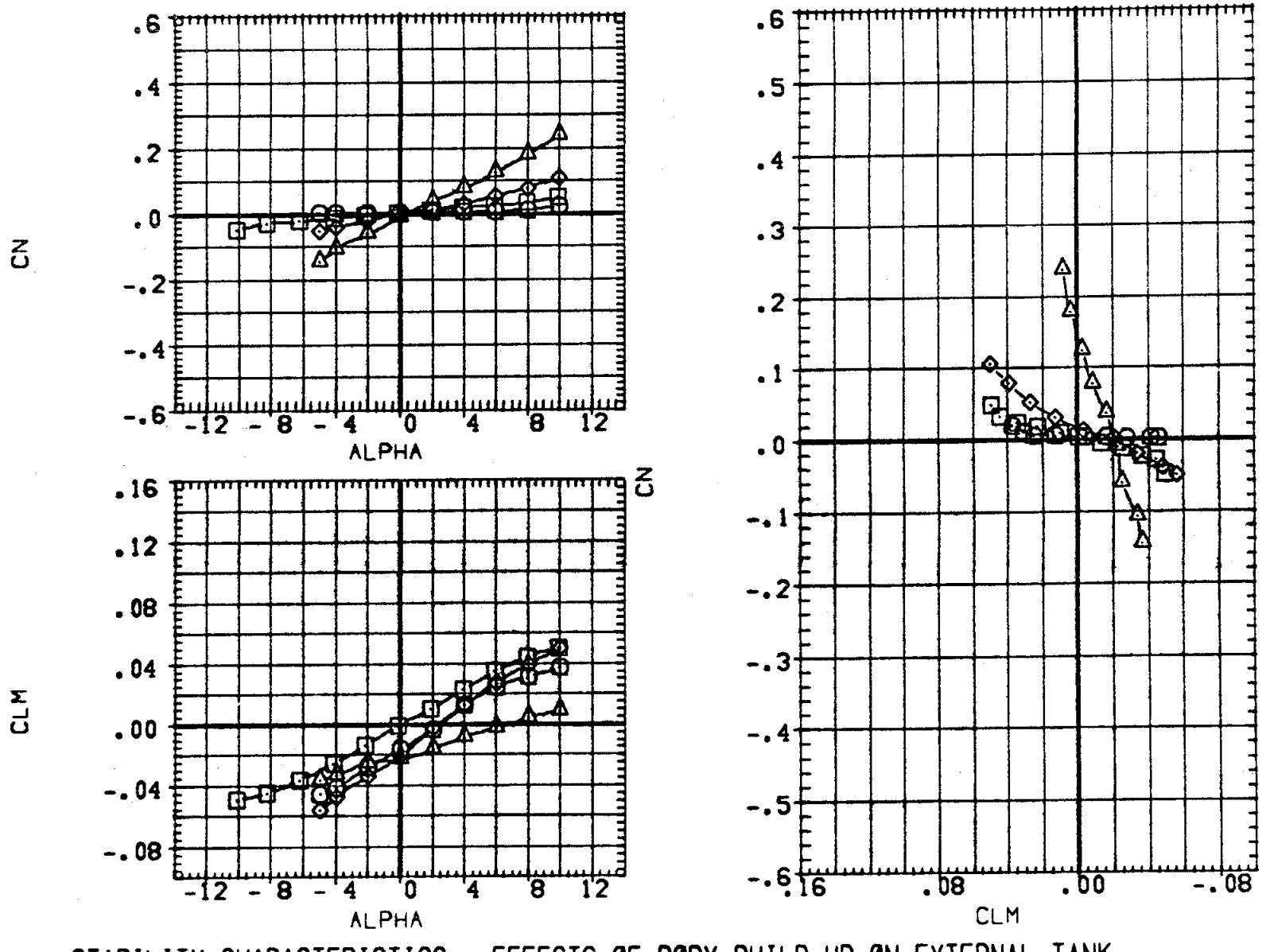
(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

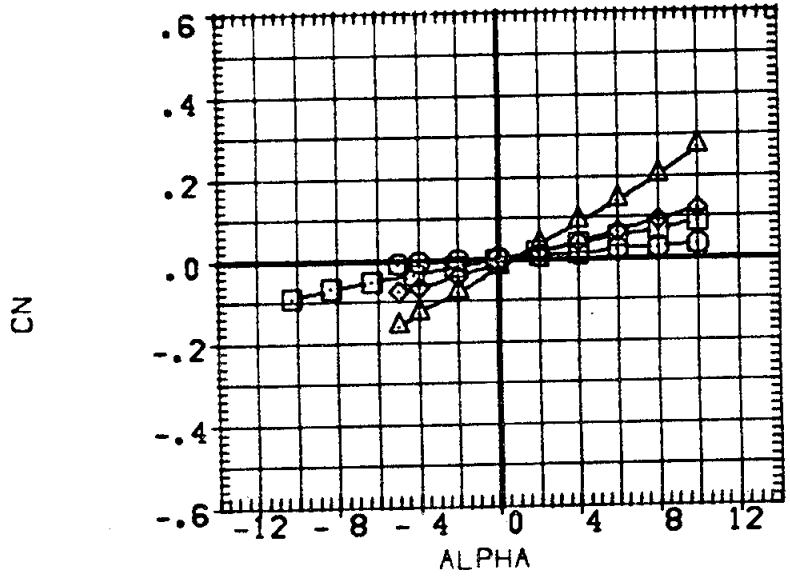
(A)MACH = .60

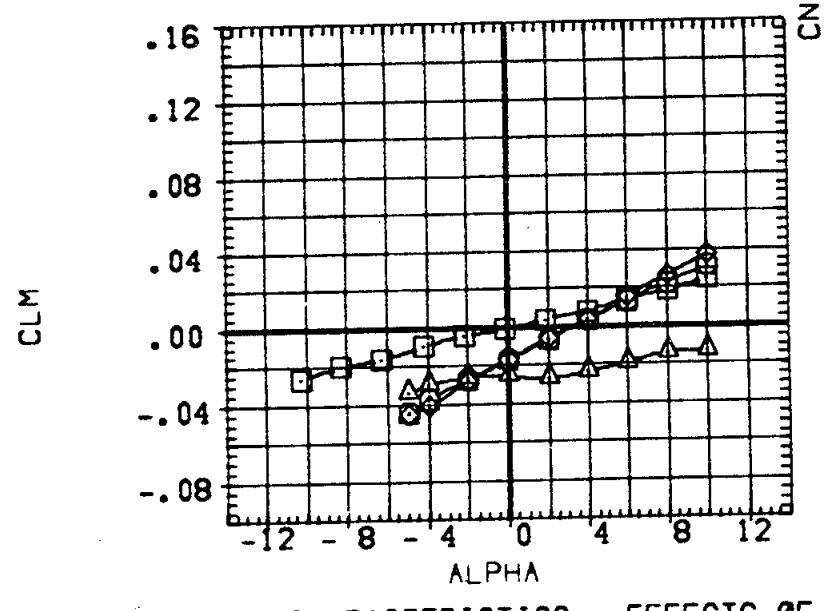
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

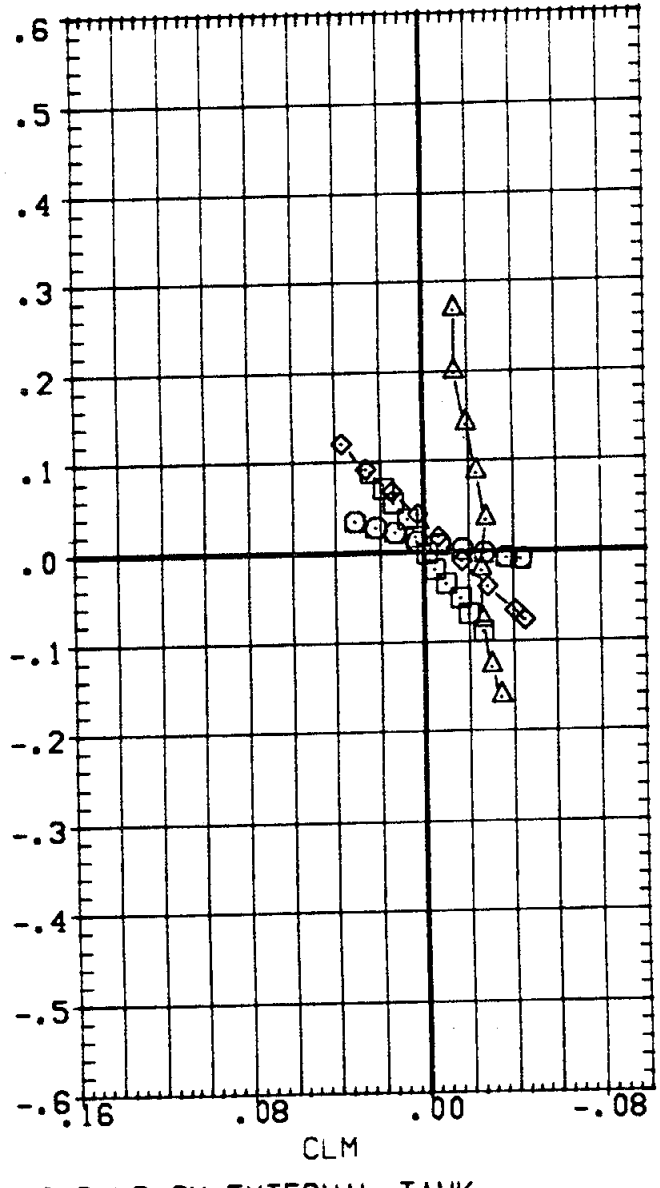
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

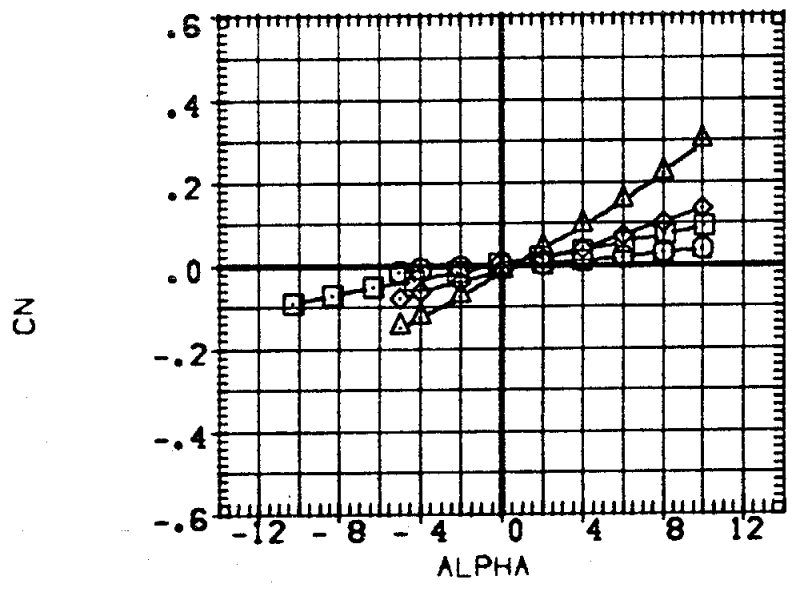
(B)MACH = .90

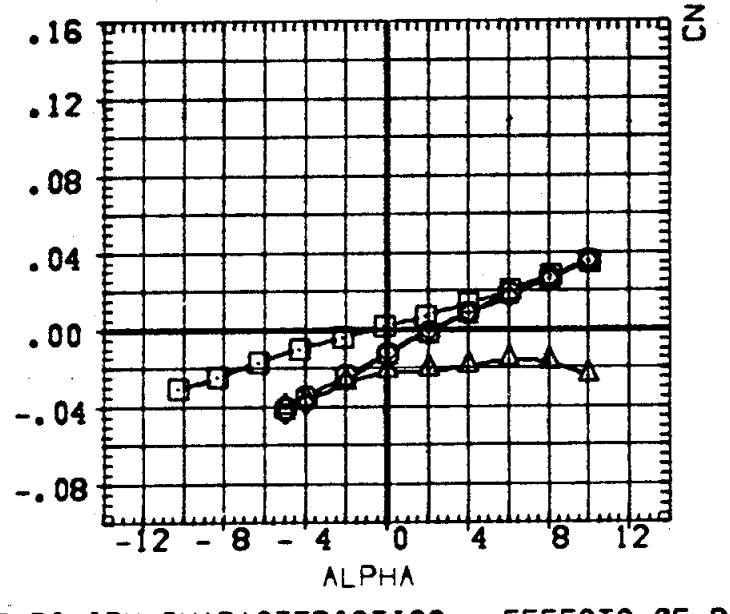
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

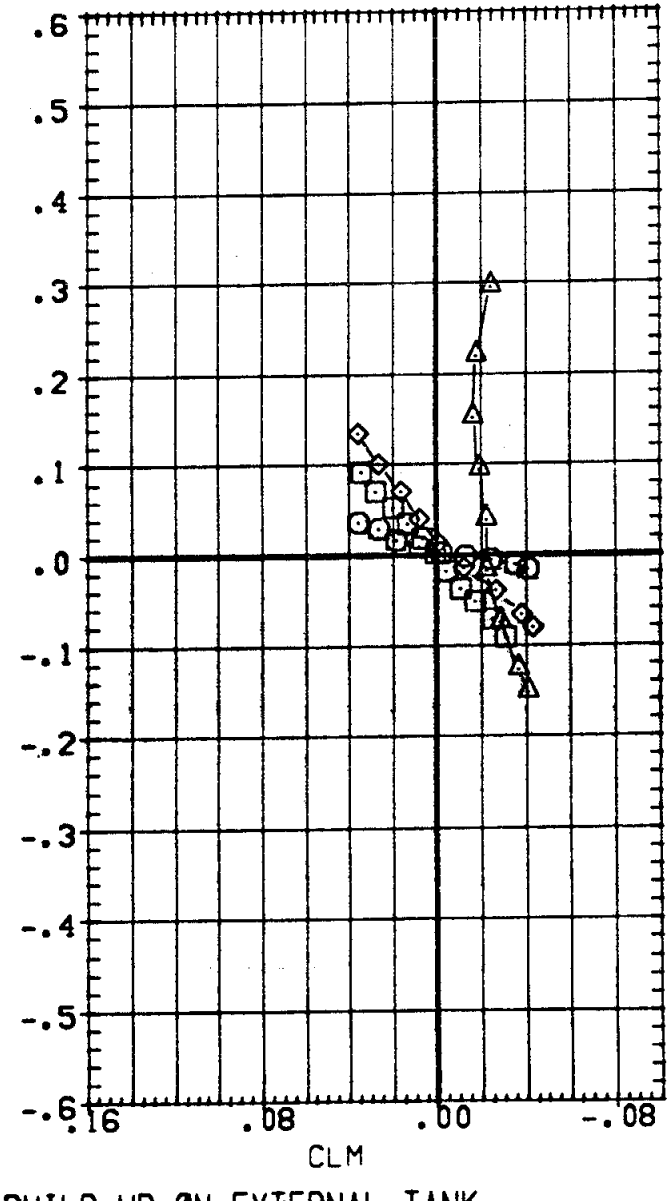
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

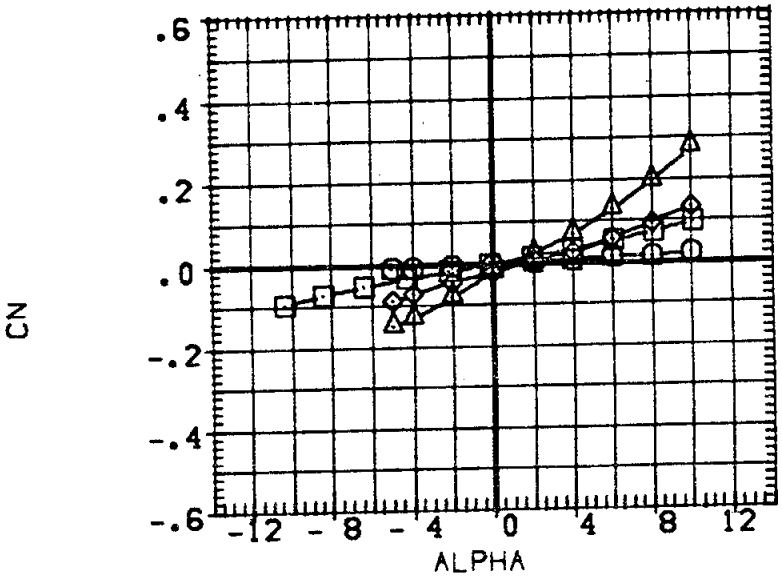
(C)MACH = .99

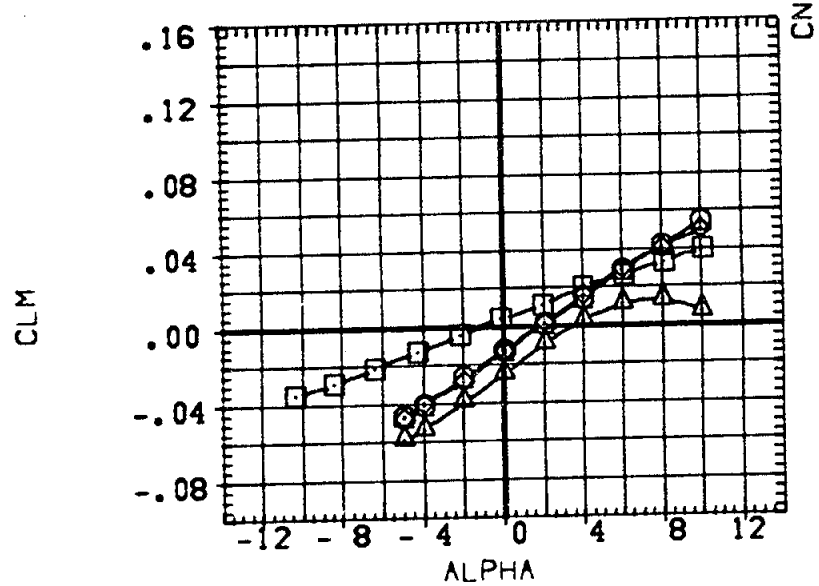
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

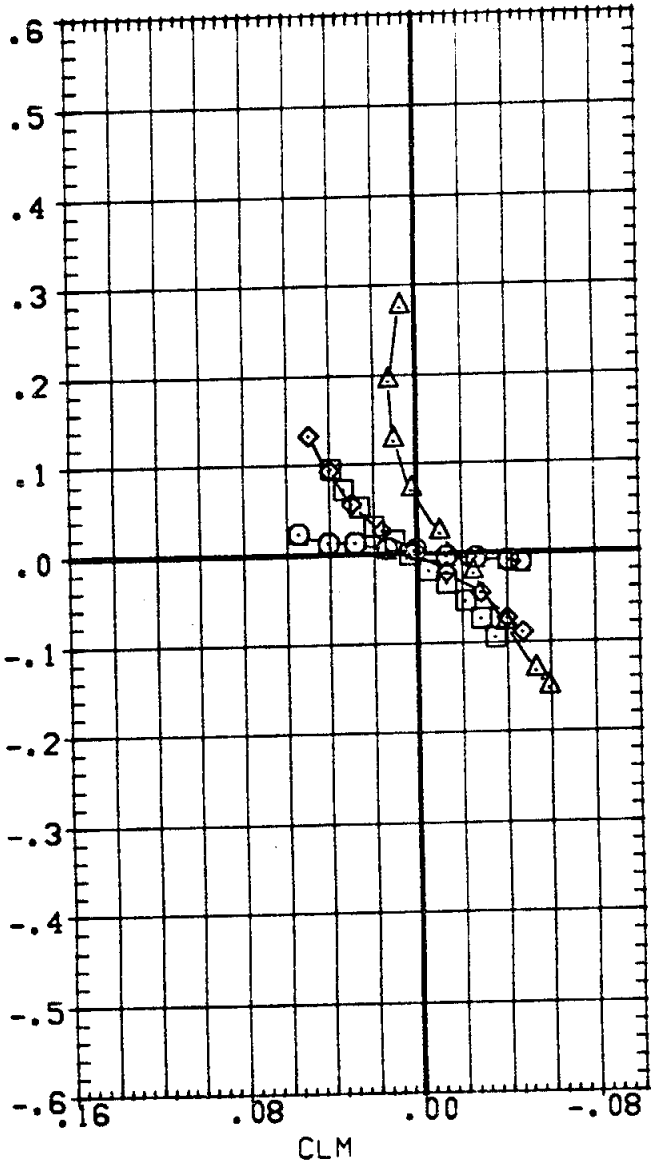
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

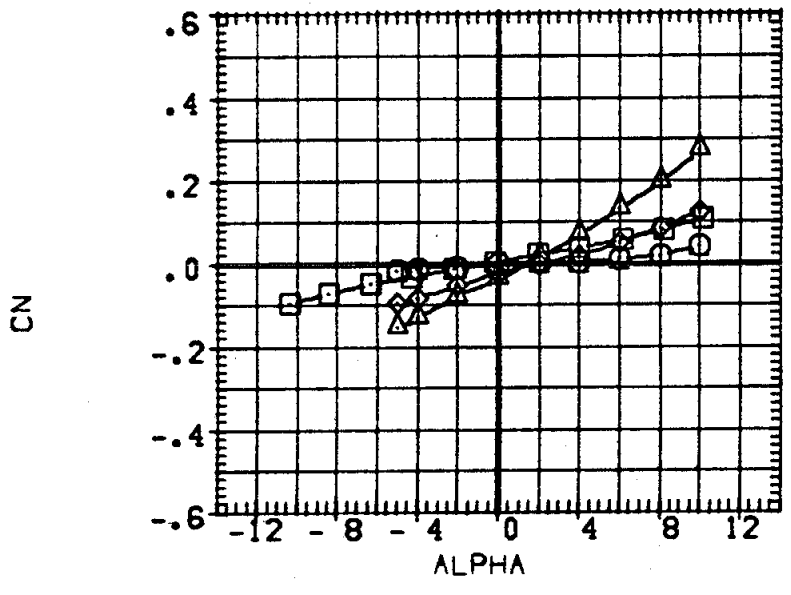
(D)MACH = 1.20

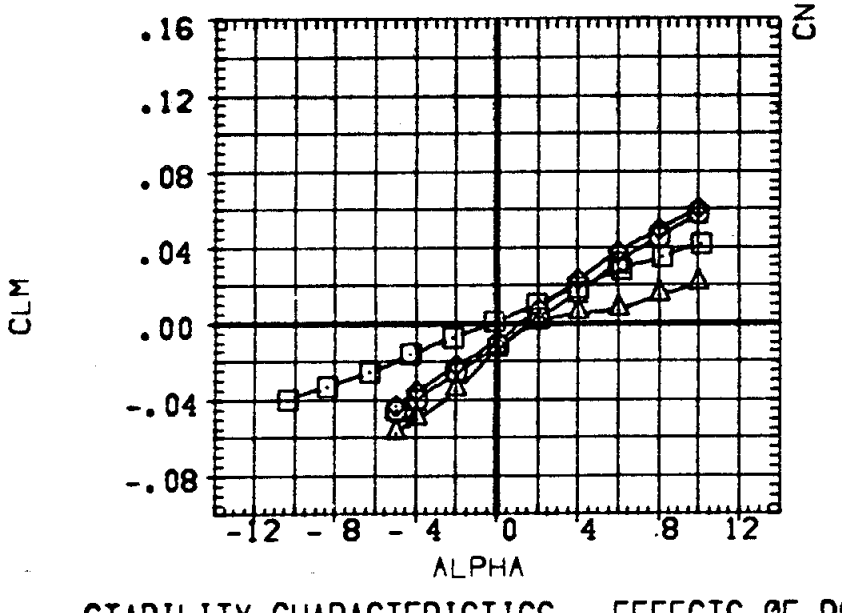
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

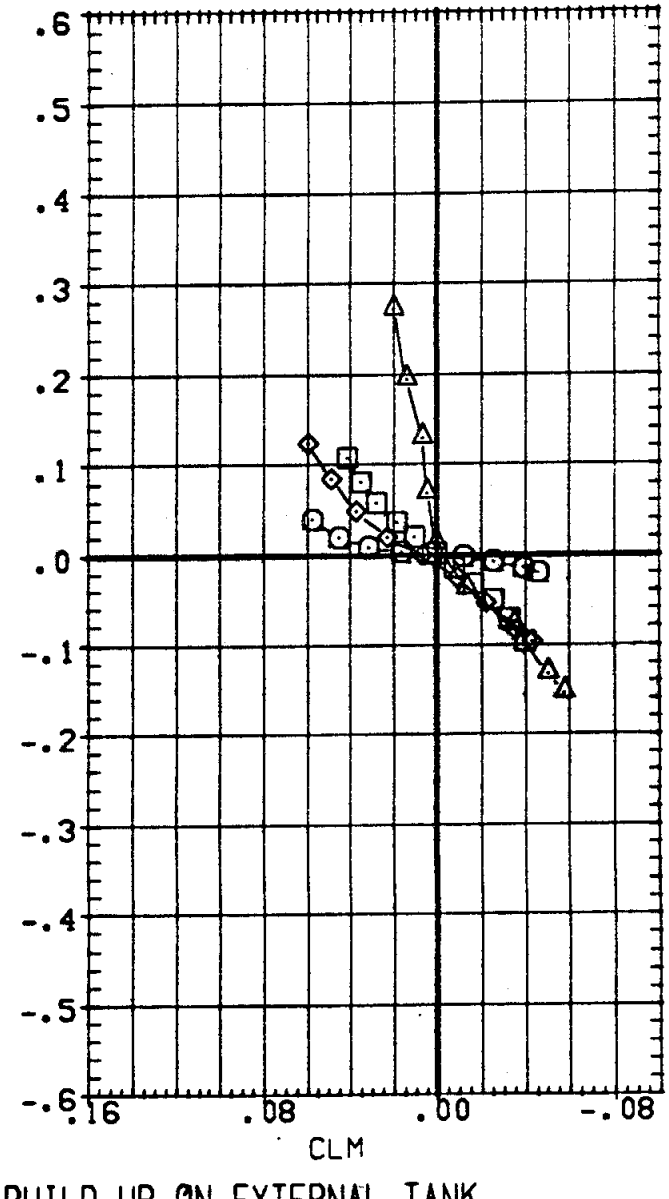
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

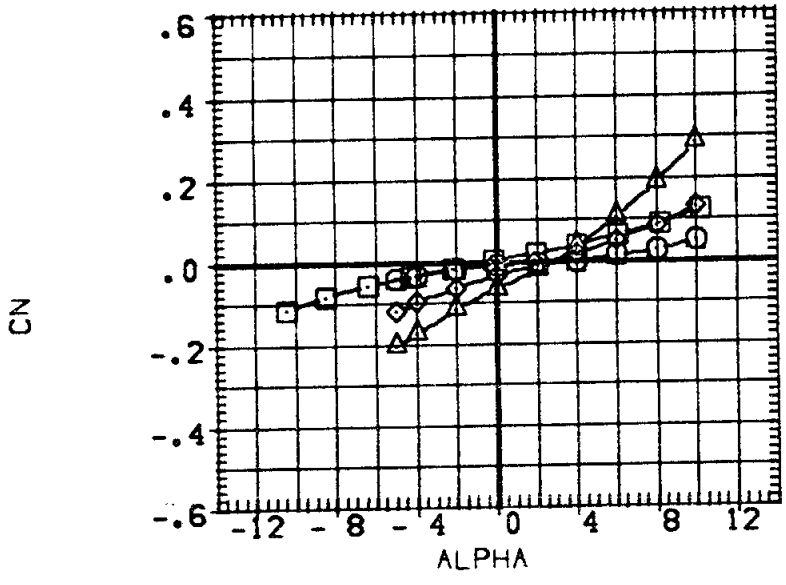
(E)MACH = 1.46

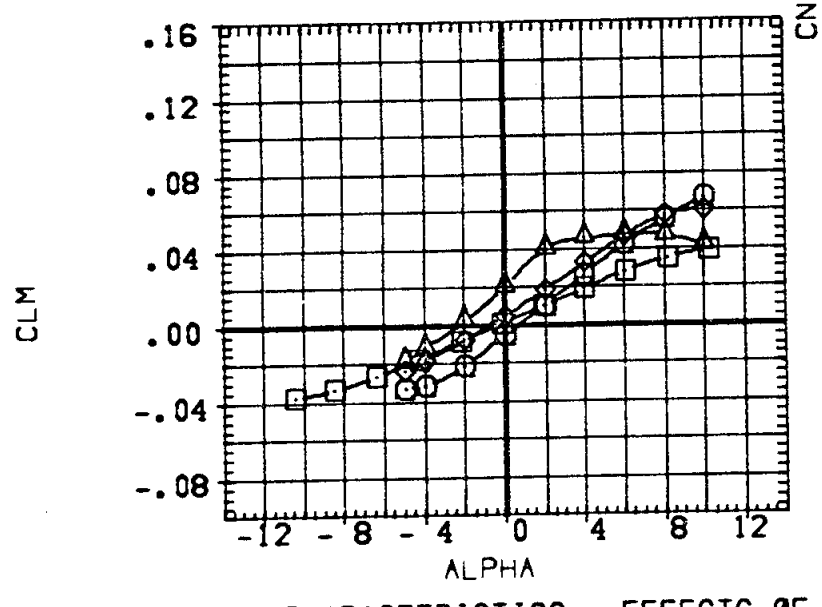
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

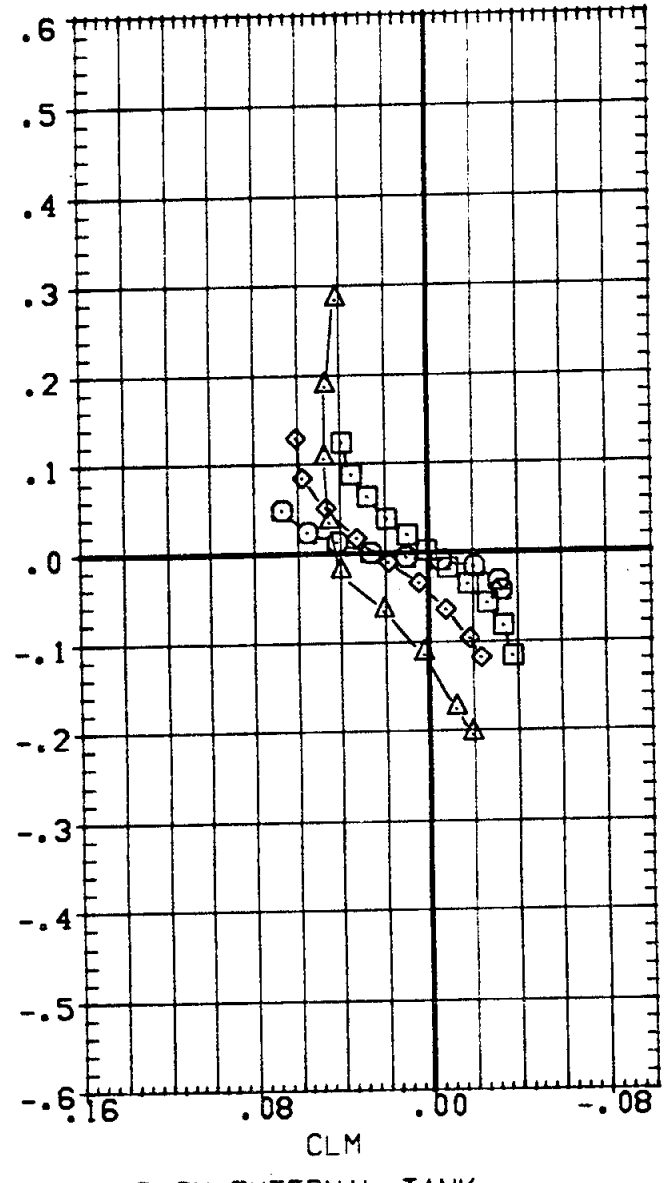
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

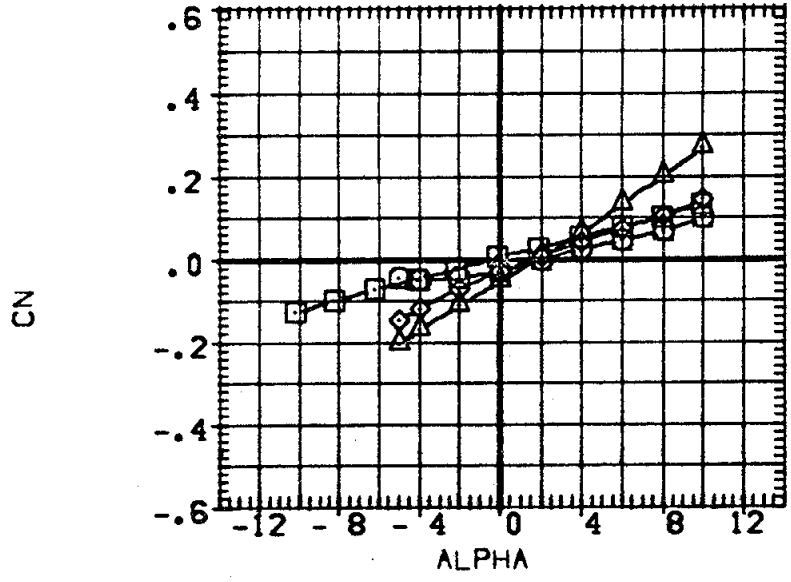
(F)MACH = 1.95

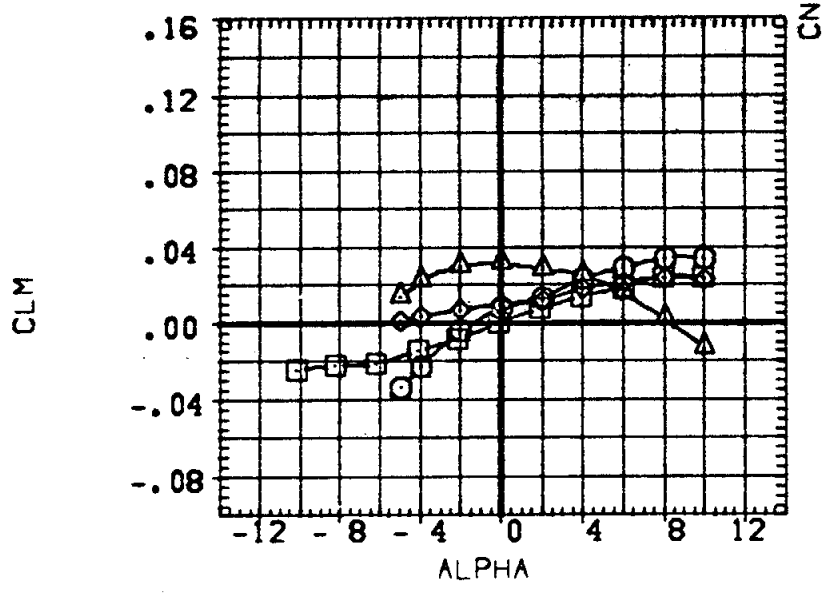
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

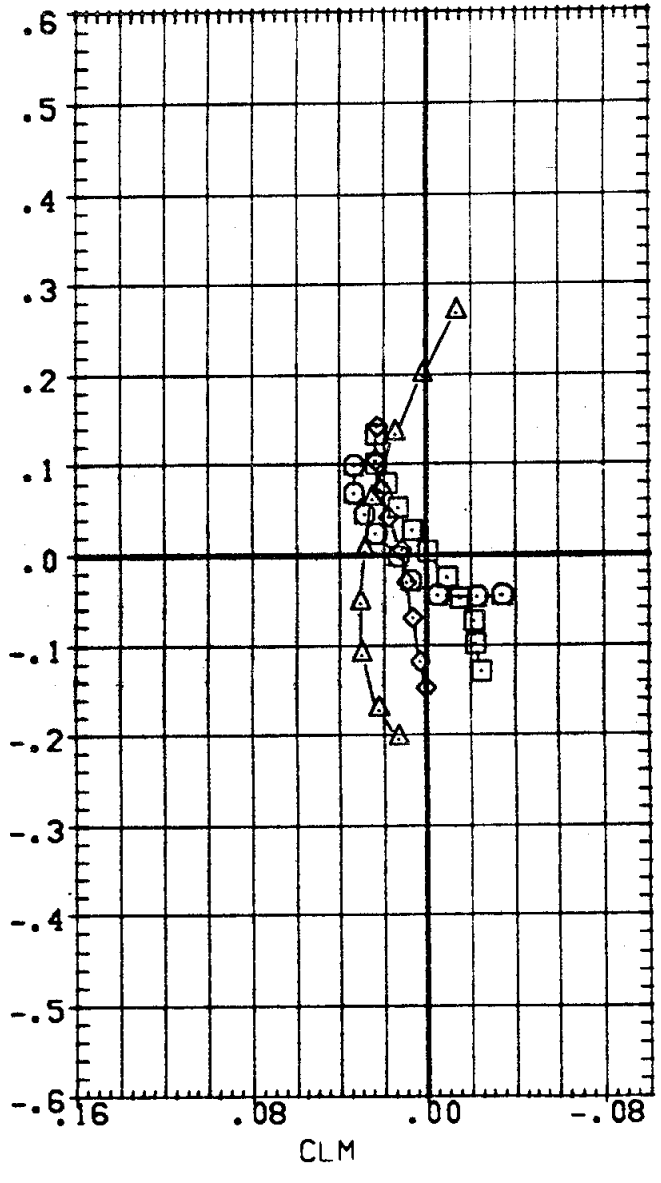
ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

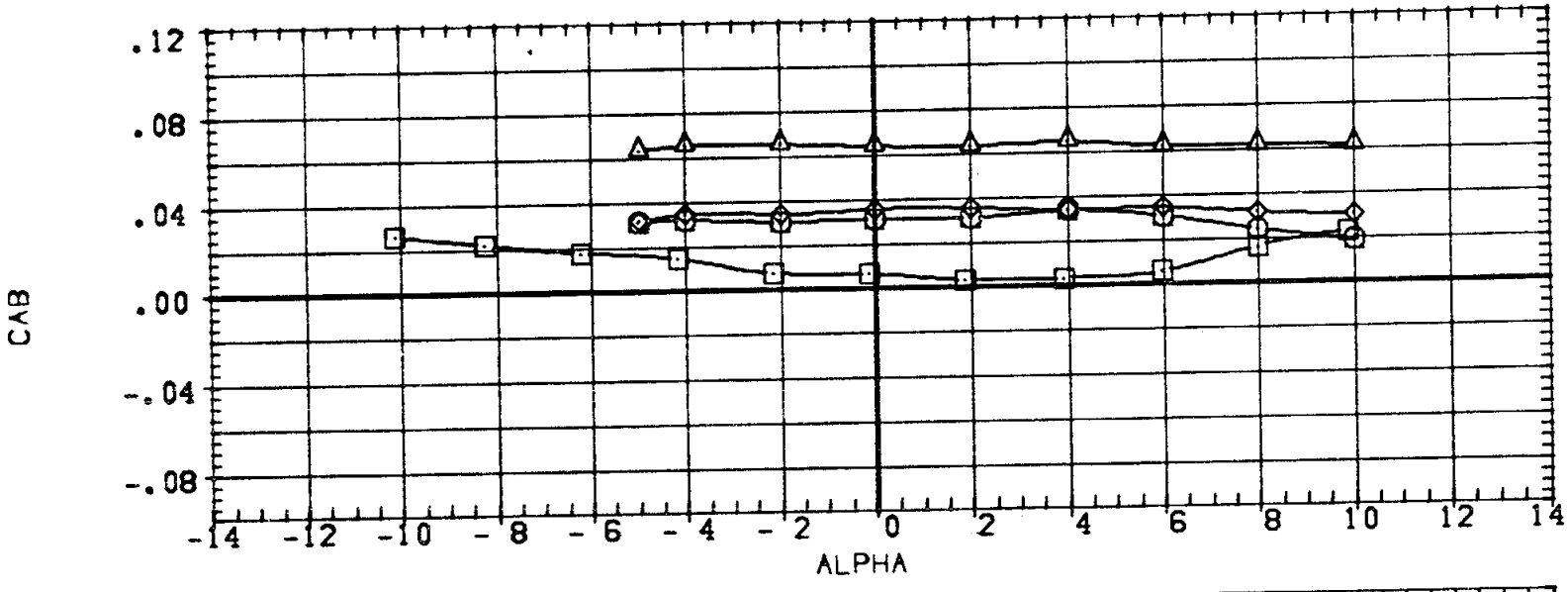
(G)MACH = 4.96

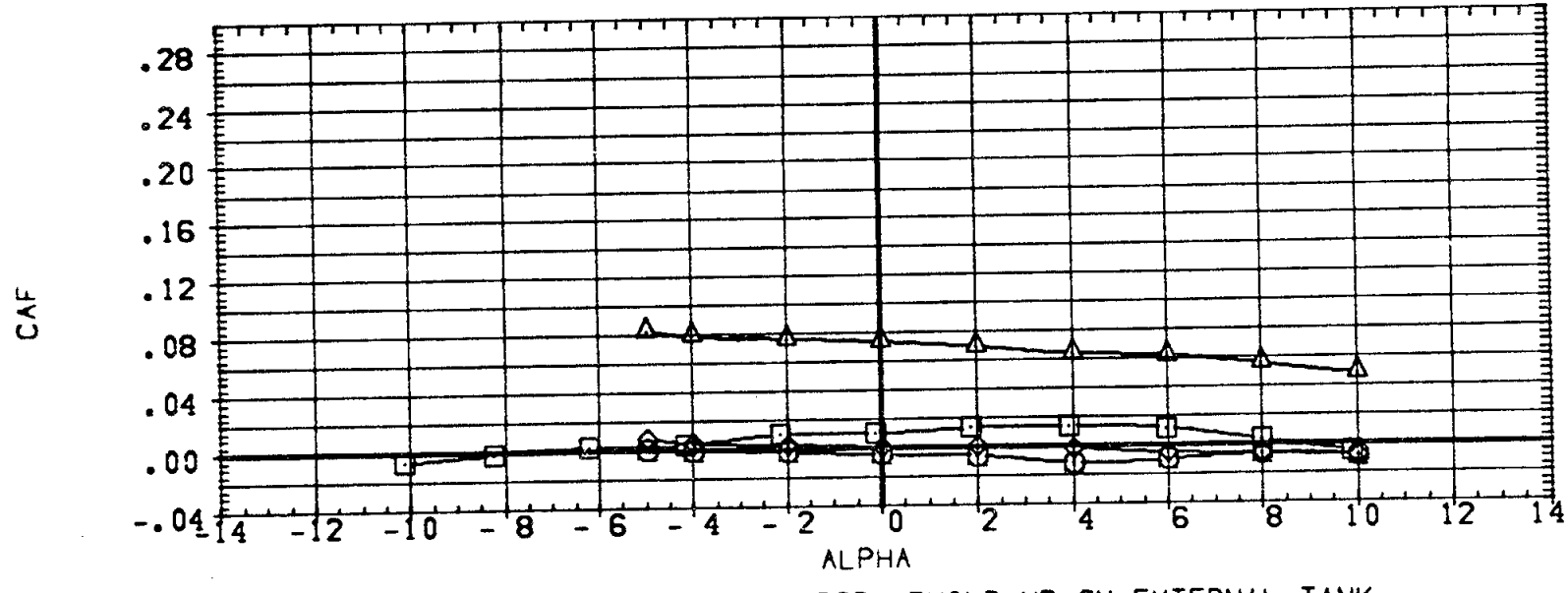
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



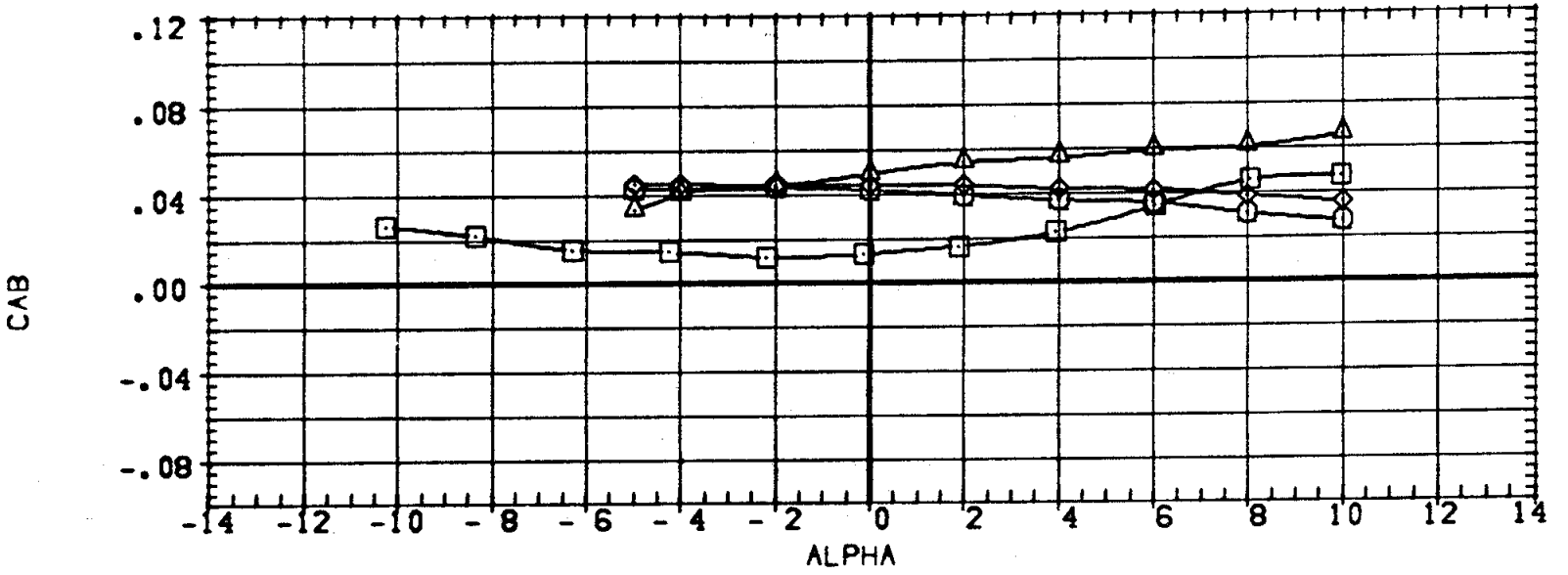


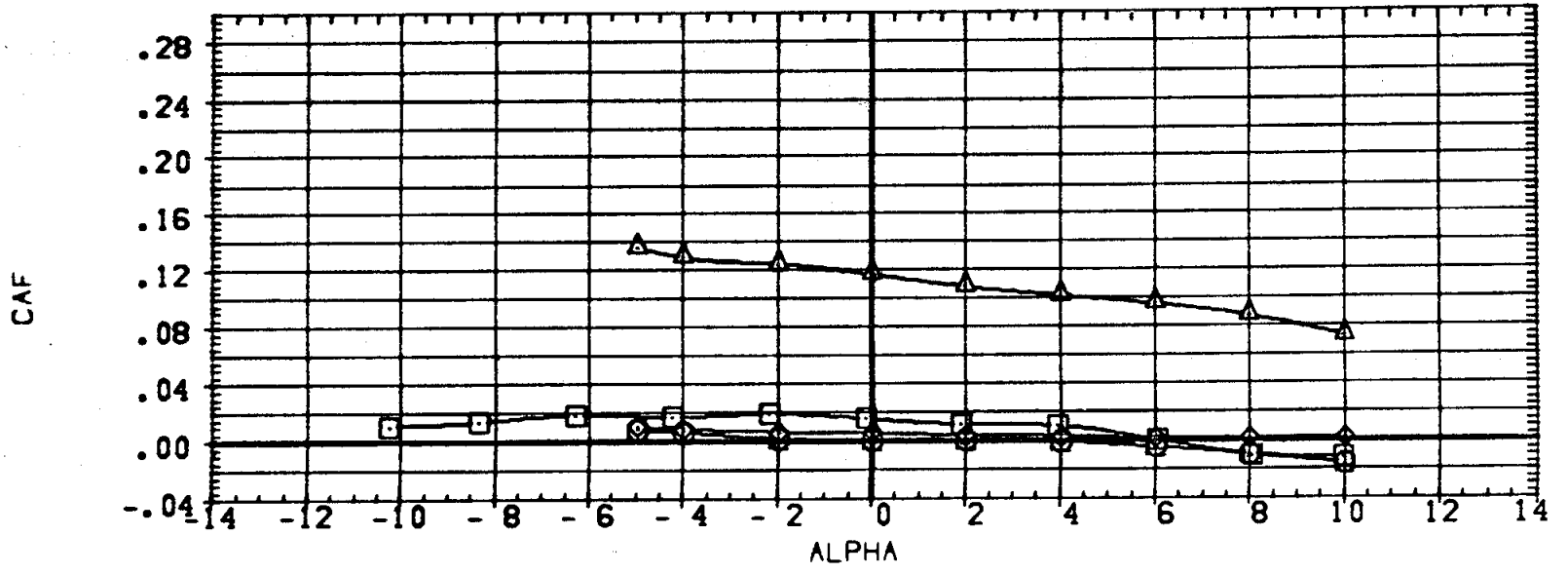
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2102)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)	-1.200	.120	10.000	
(AY2123)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	-1.200	.120	10.000	-.624
(AY2130)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	-1.200	.120	10.000	-.624
(AY2601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

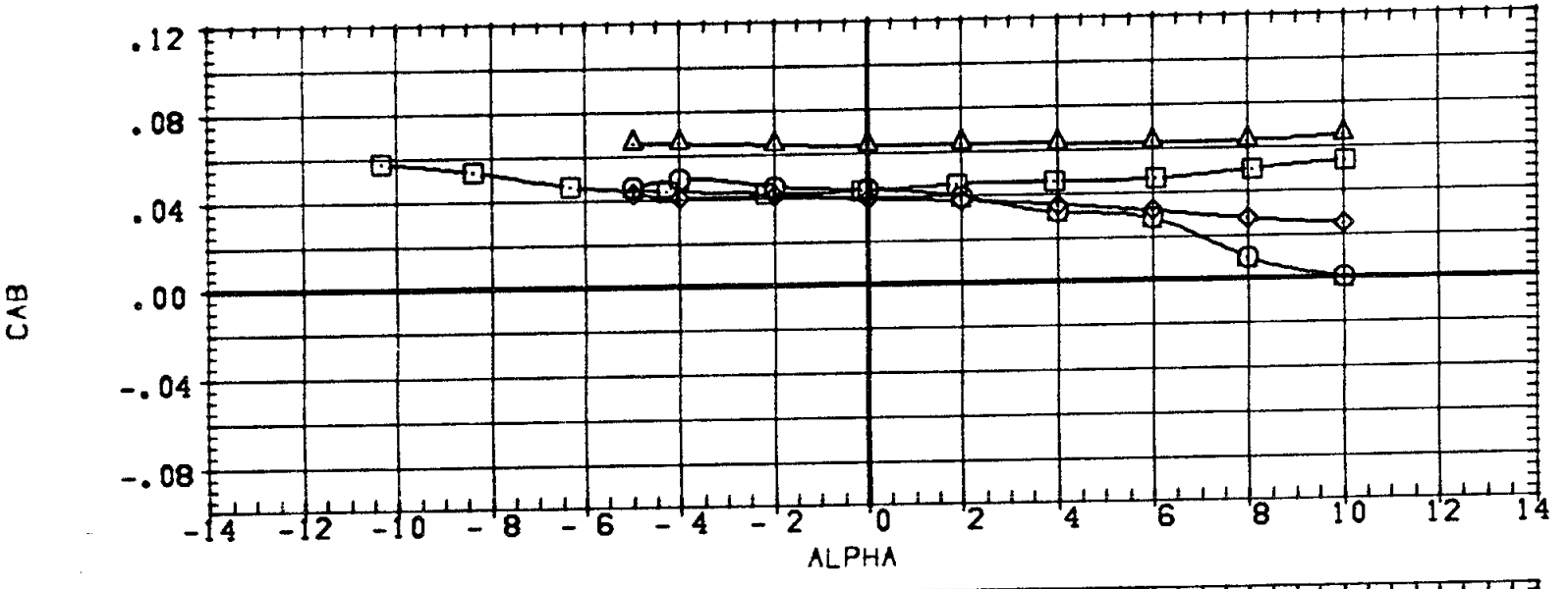
(B)MACH = .90

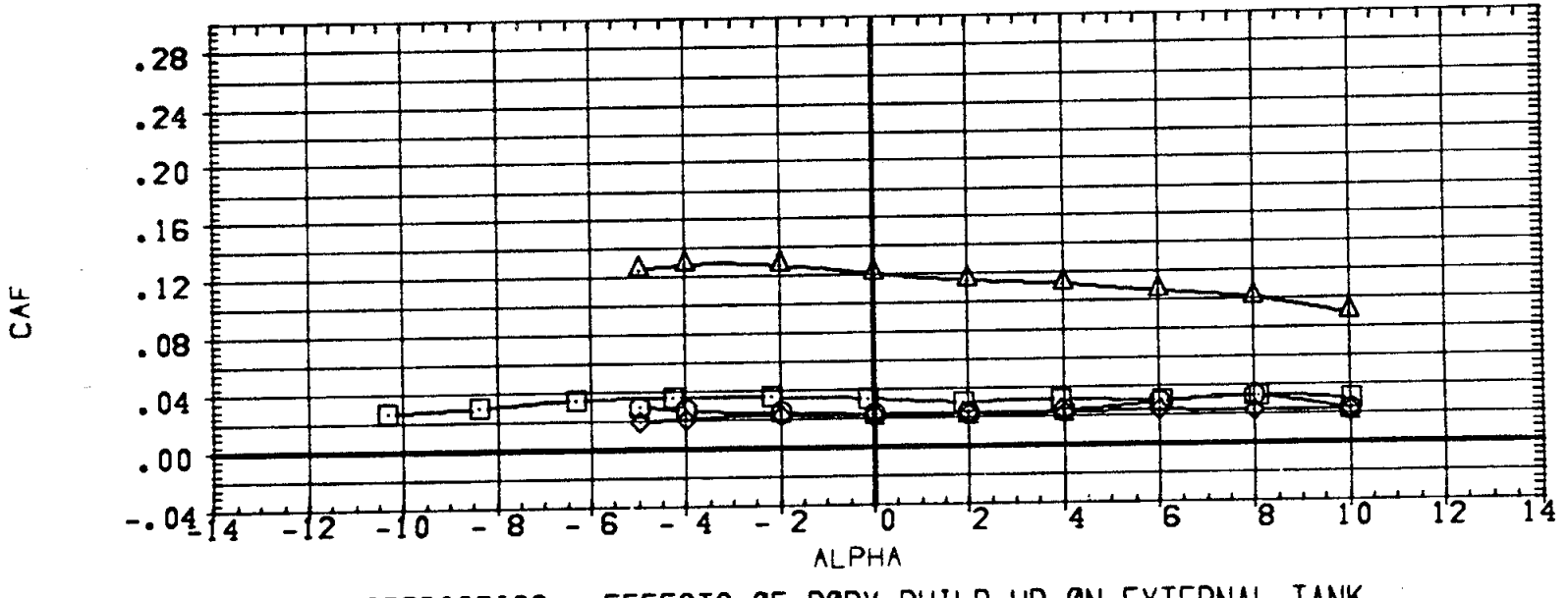
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	MSFC 545 (1A1) MOD ATP LV-(TS)/(O1)
(A72123)	MSFC 545 (1A1) MOD ATP LV-(TS)(S1)/(O1)
(A72130)	MSFC 545 (1A1) MOD ATP LV-(TS)/(S1)/(O1)
(A72601)	MSFC 545 (1A1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	5220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



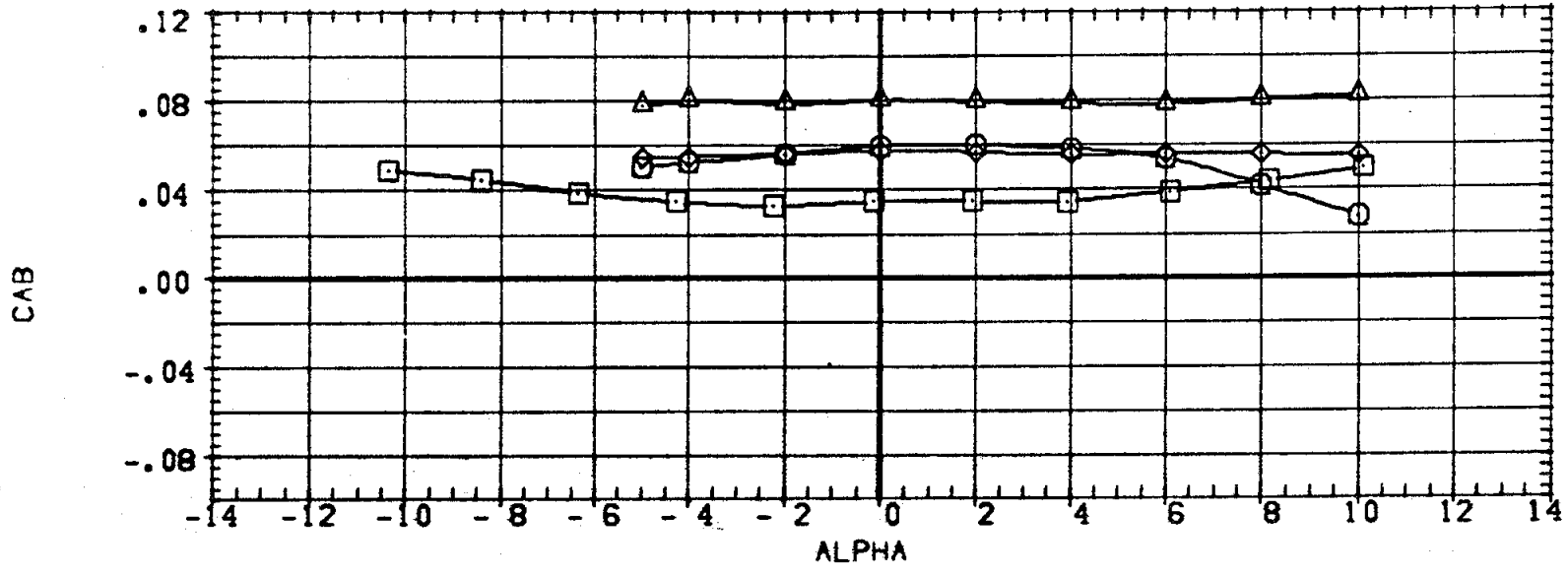


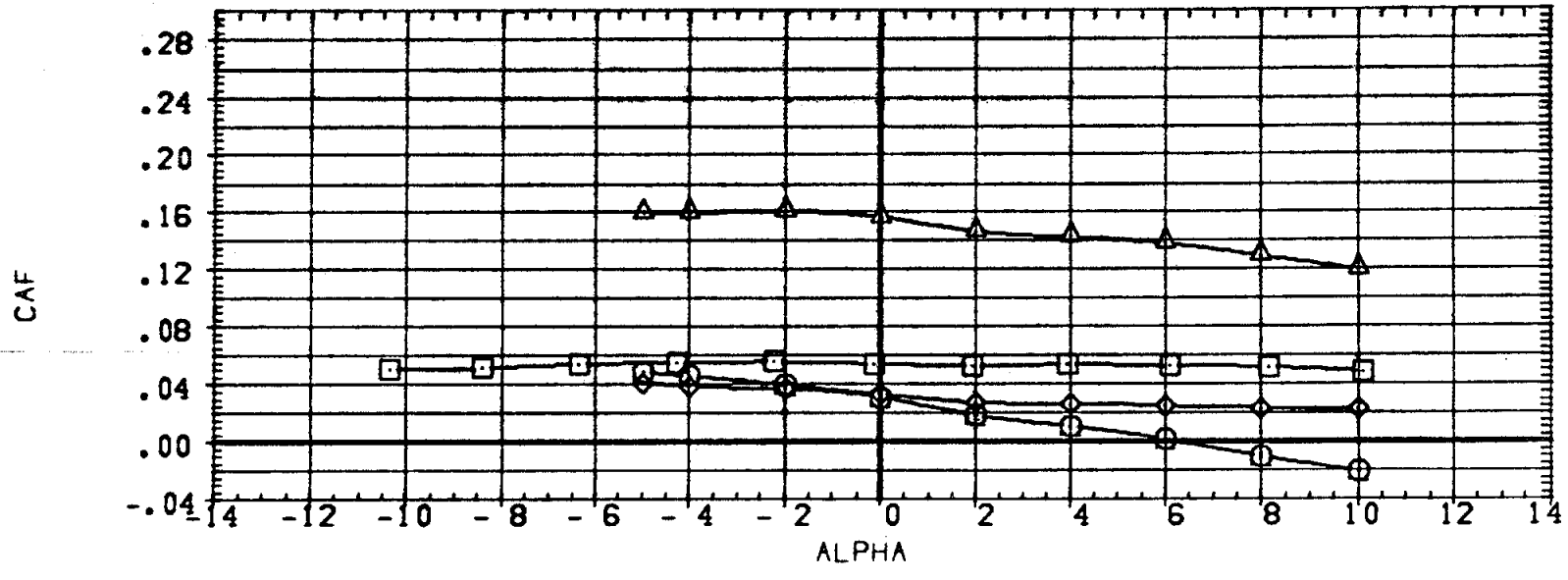
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(C)MACH = .99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	-1.200	.120	10.000	
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	-1.200	.120	10.000	-.624
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	-1.200	.120	10.000	-.624
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

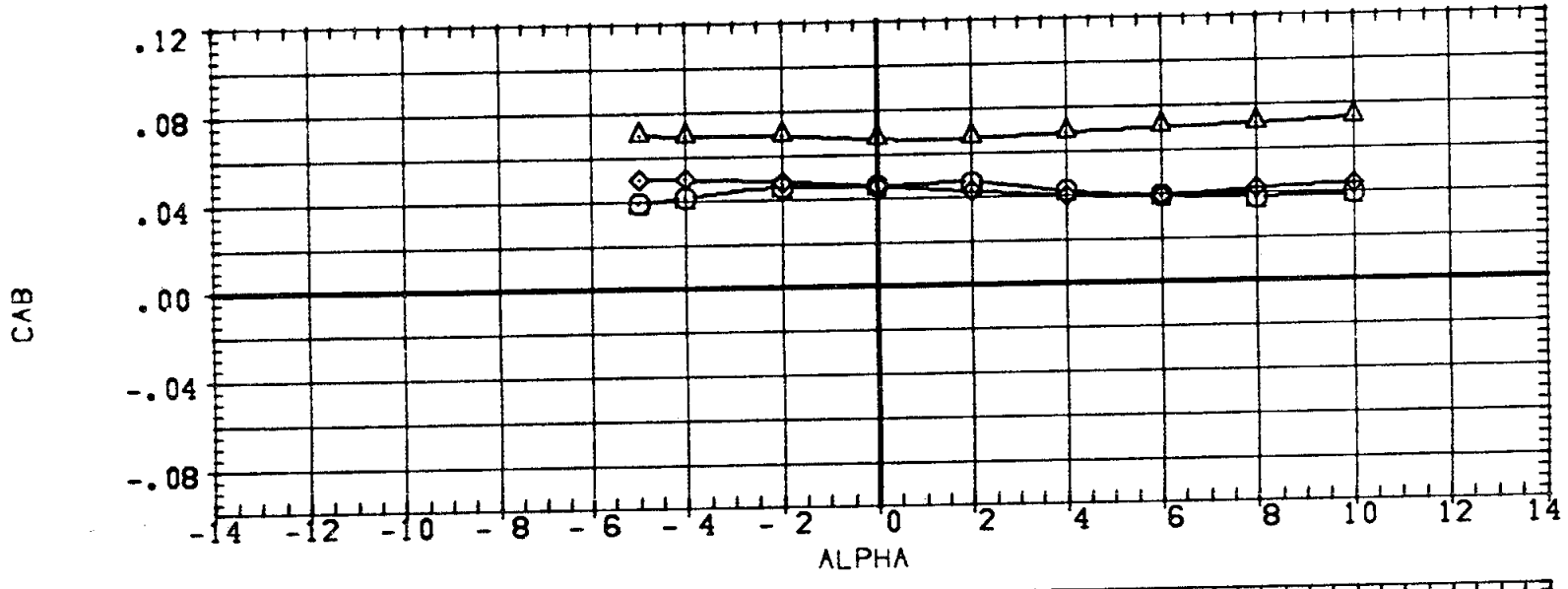
(D)MACH = 1.20

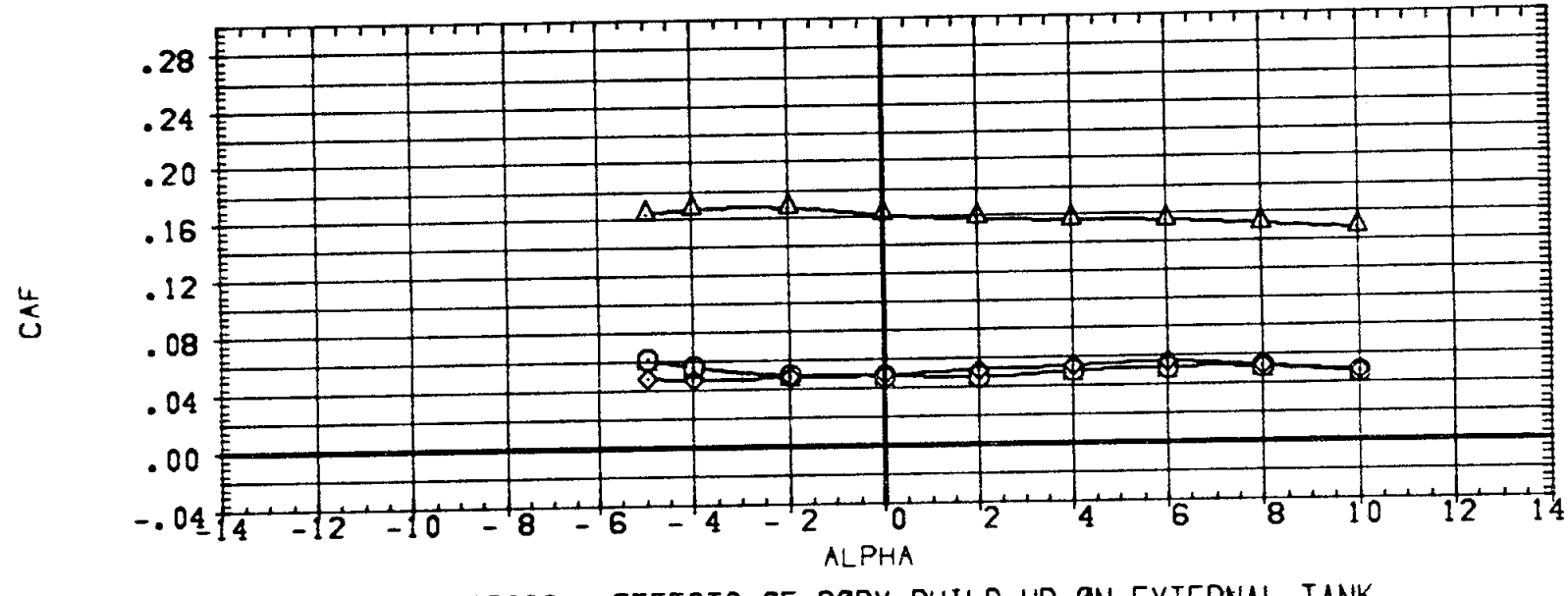
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72123)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72130)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





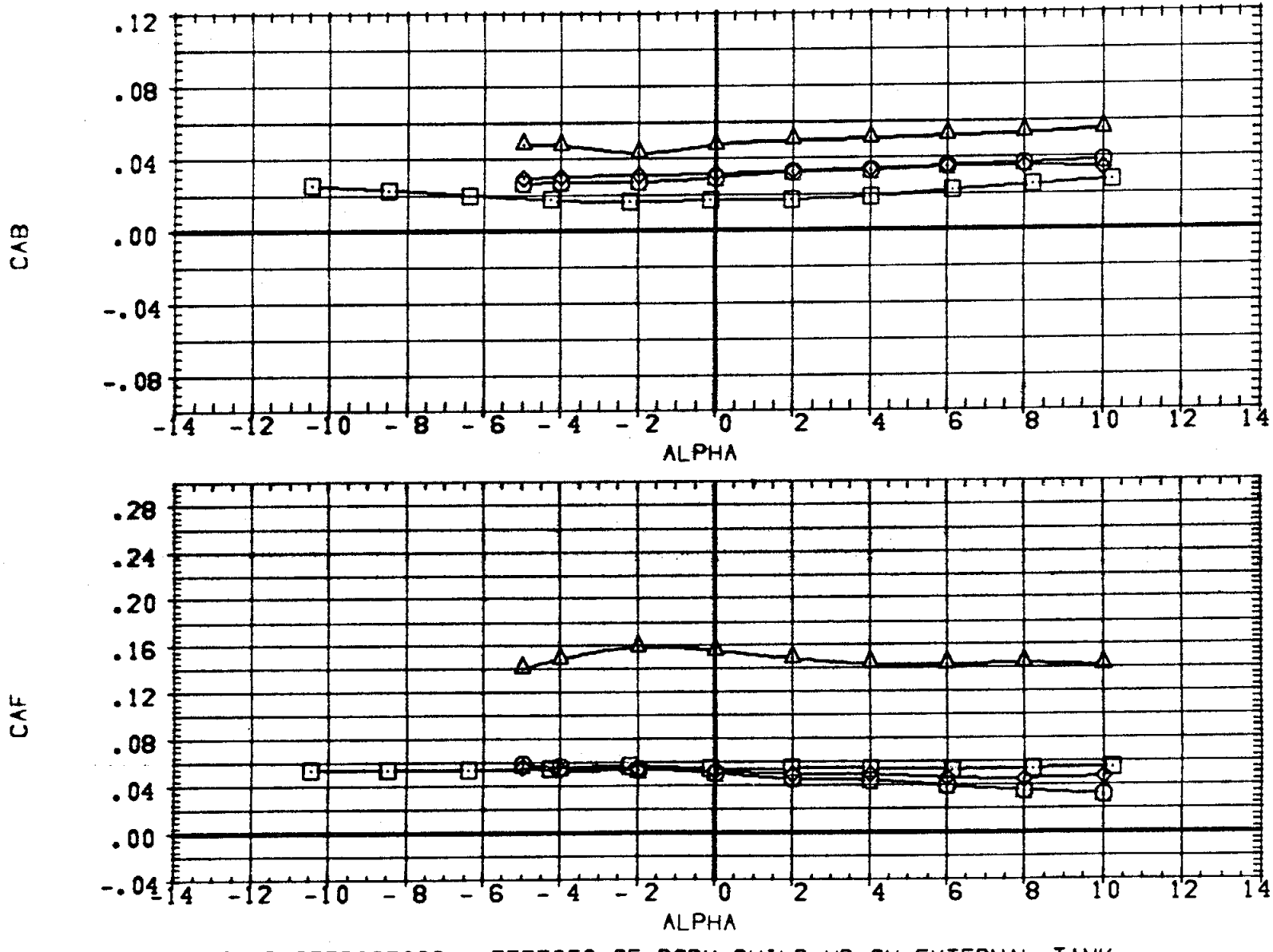
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72102)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)	-1.200	.120	10.000	
(A72123)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	-1.200	.120	10.000	-.624
(A72130)	⊠	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	-1.200	.120	10.000	-.624
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

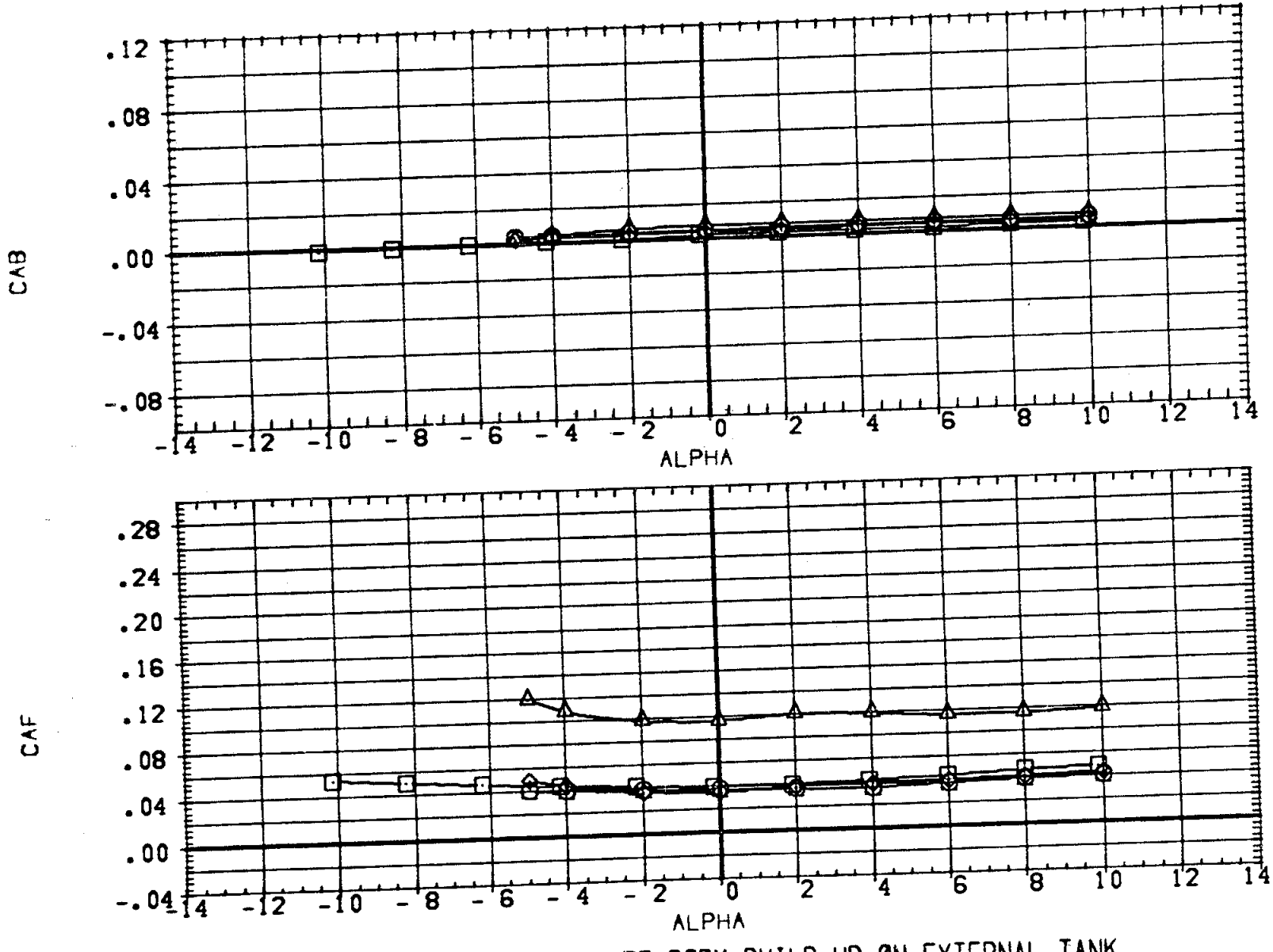
(F)MACH = 1.95

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72102)	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72123)	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72130)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
-1.200	.120	10.000	
-1.200	.120	10.000	-.624
-1.200	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

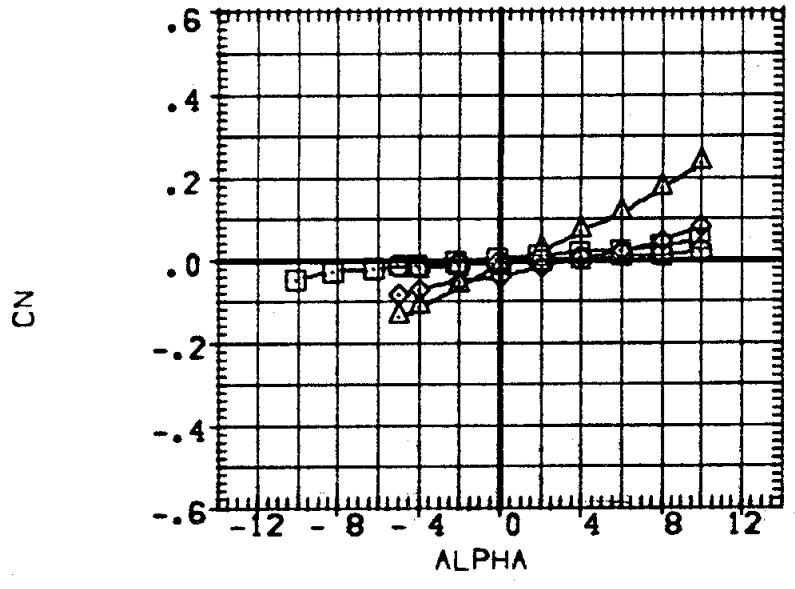
(G)MACH = 4.96

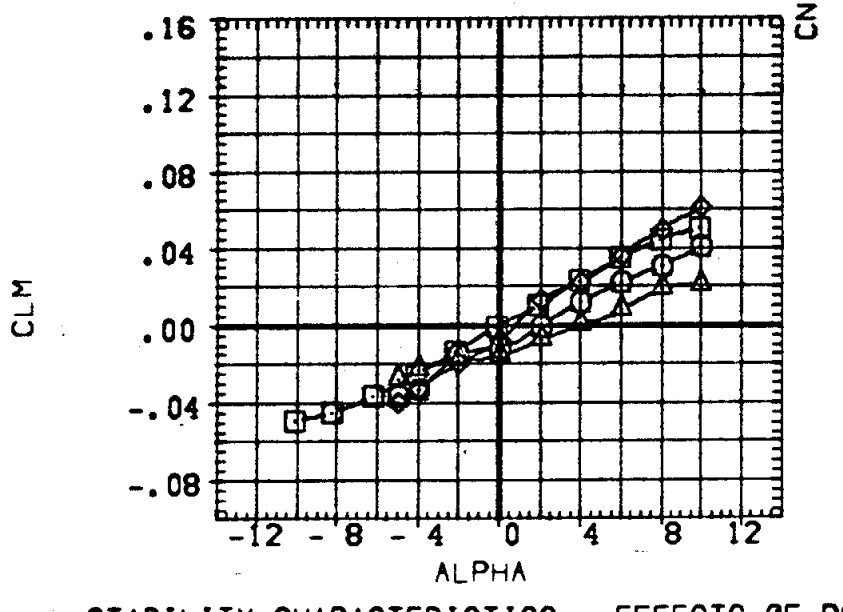
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72131)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

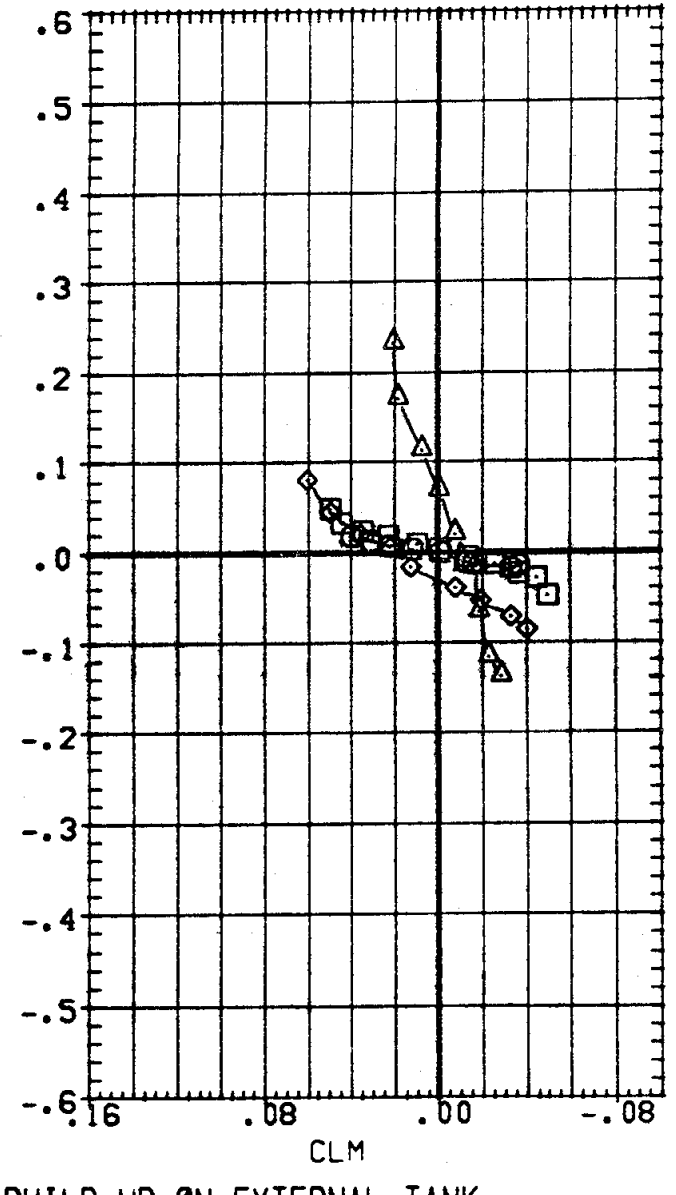
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

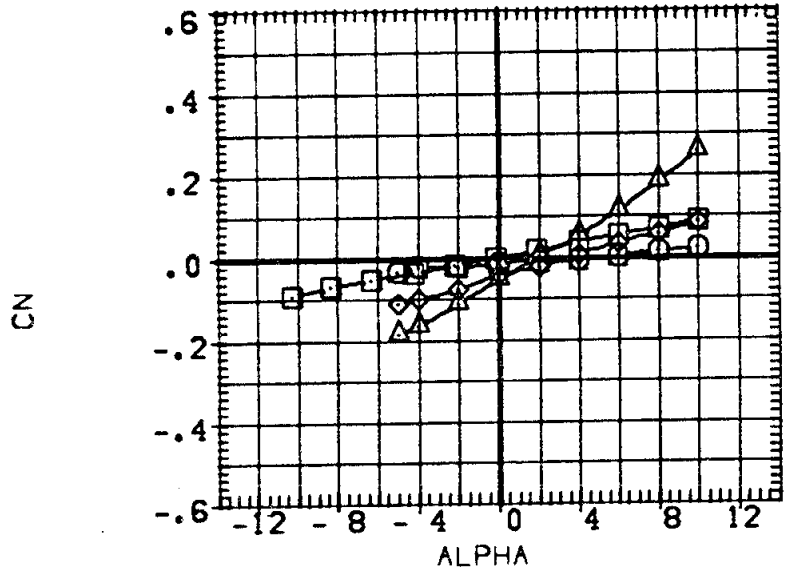
(A)MACH = .60

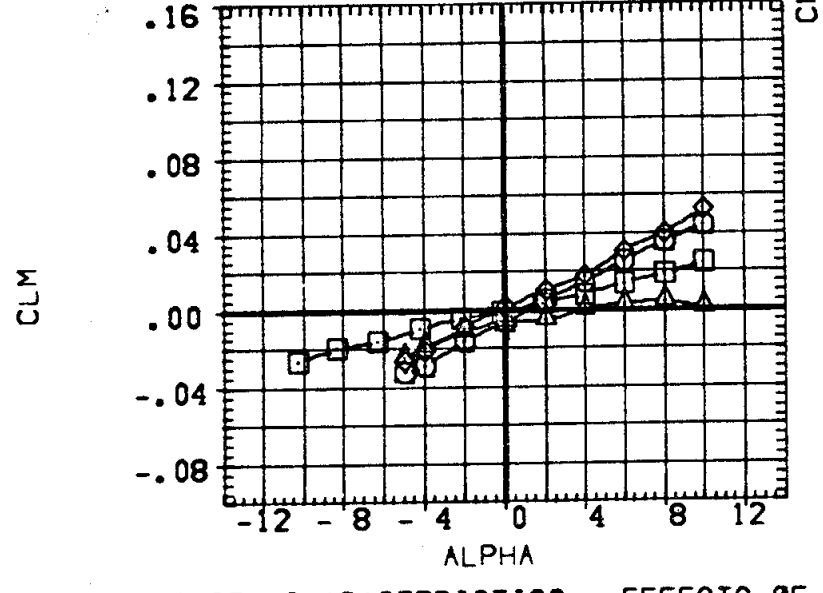
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(O1)
(A72124)	⊠	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)
(A72131)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (1A1) NAR ATP BL LV-(T3)

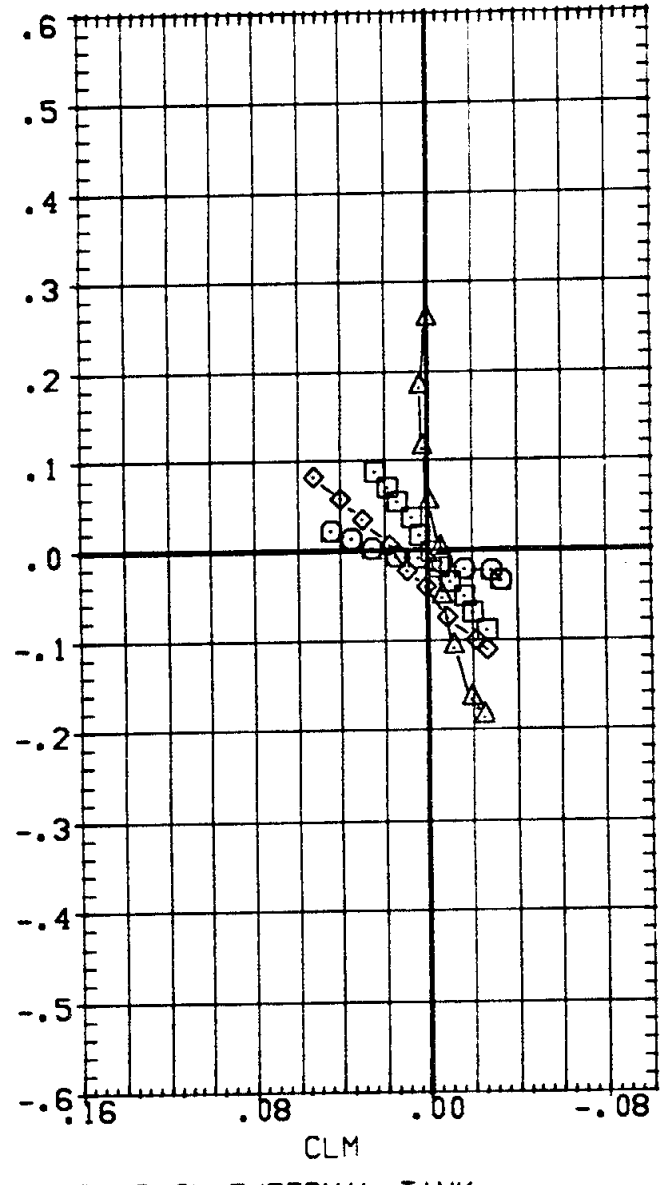
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







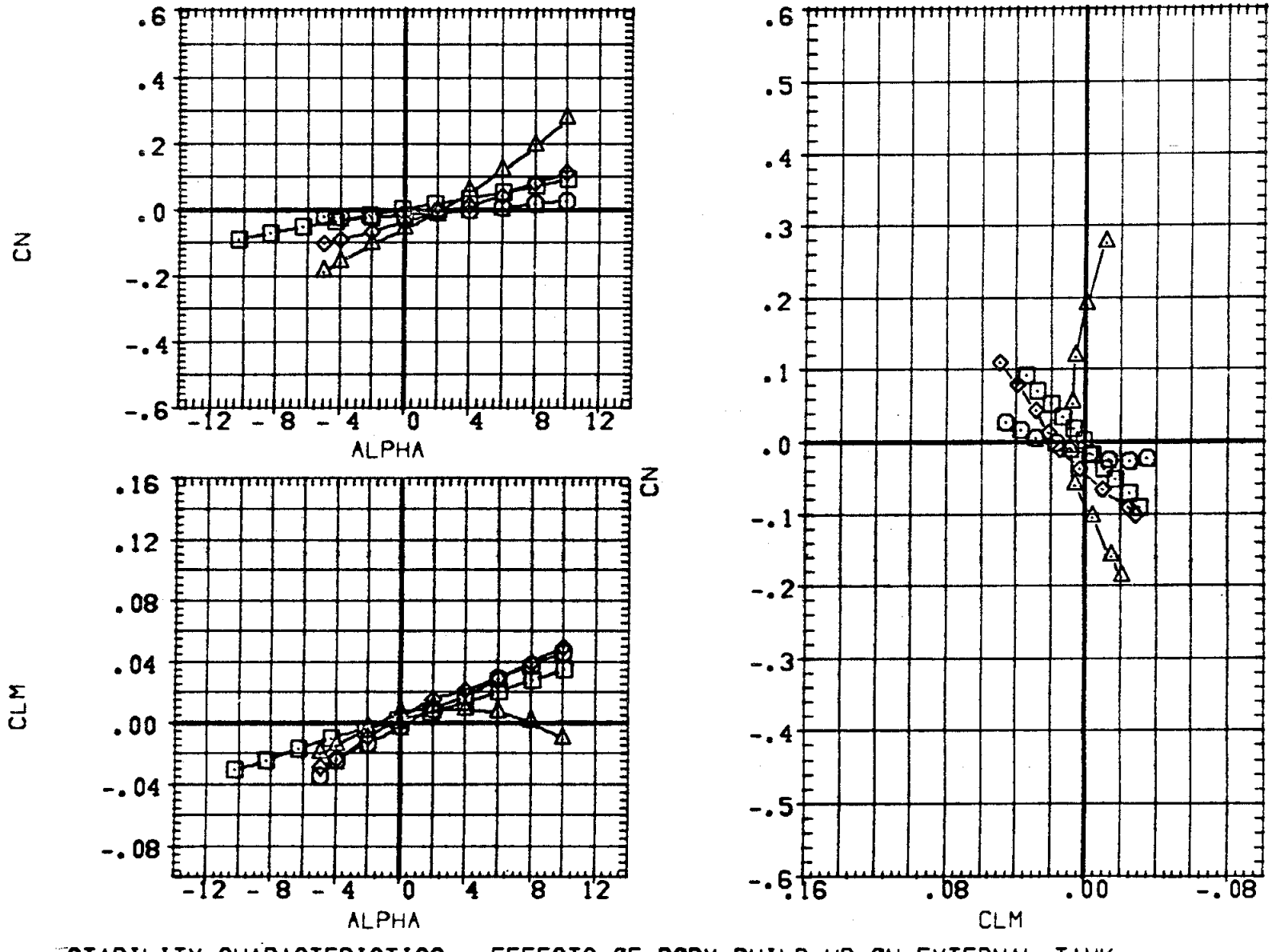
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72131)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

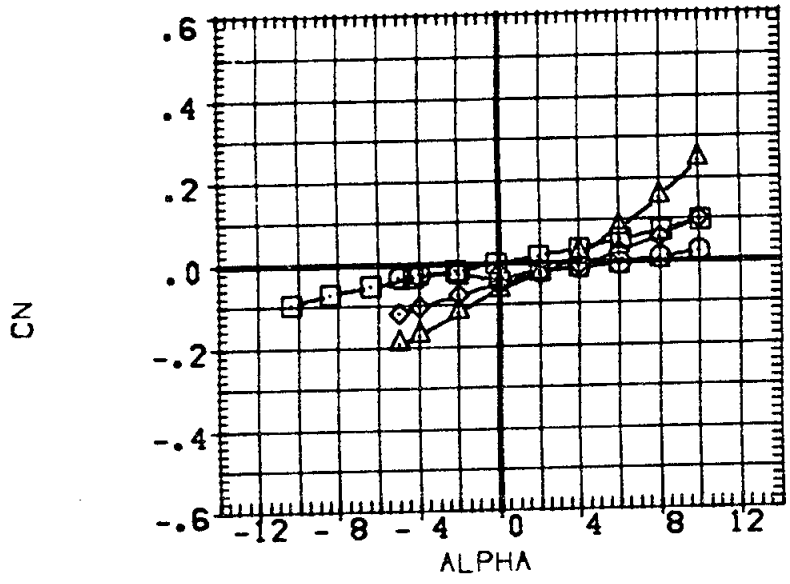
(C)MACH = .99

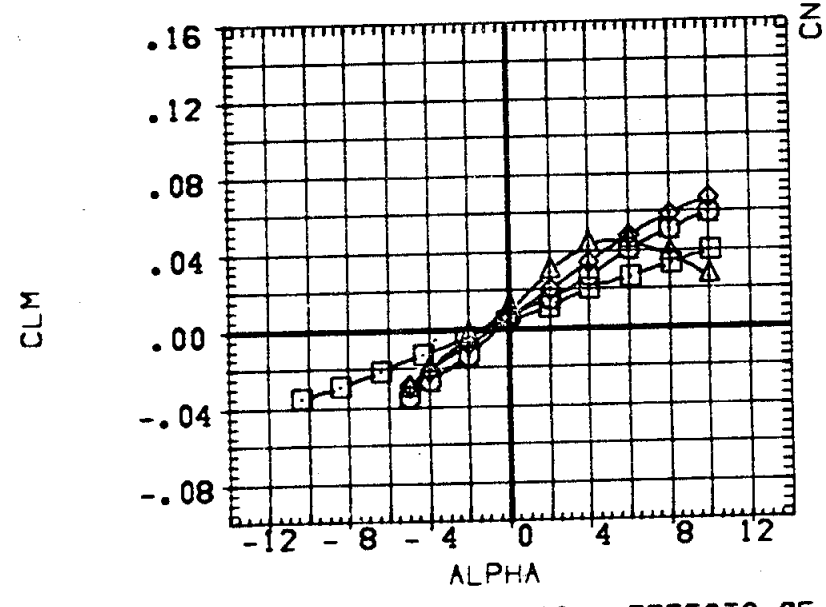
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)		MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72124)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72131)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)		MSFC 545 (IA1) NAR ATP BL LV-(T3)

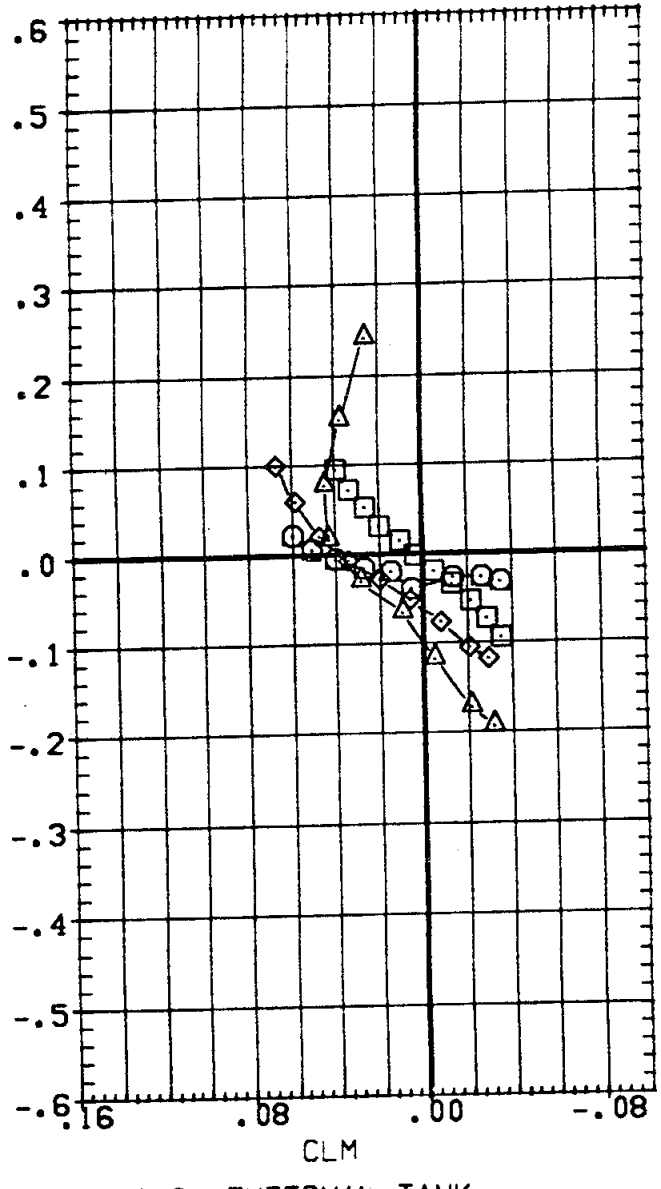
ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XHRP	.0000	
YHRP	.0000	
ZHRP	.0000	
SCALE	100.0000	PERCNT







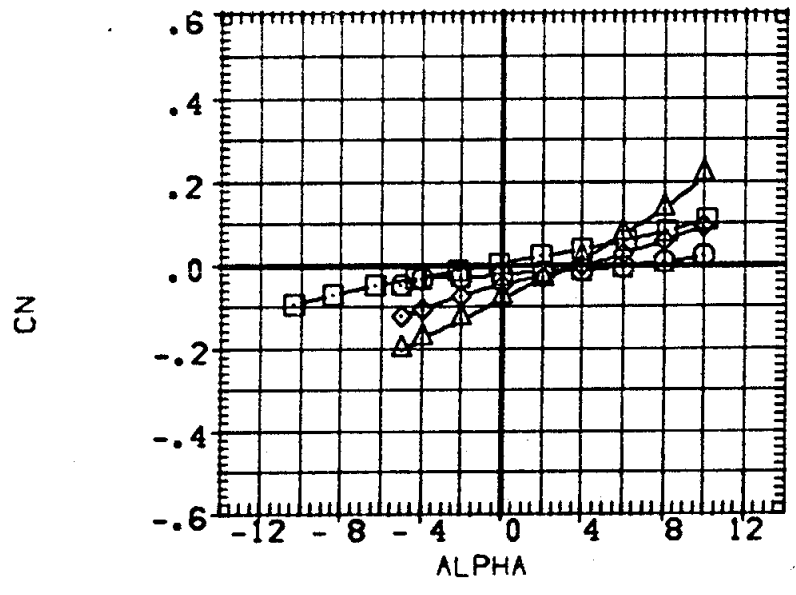
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

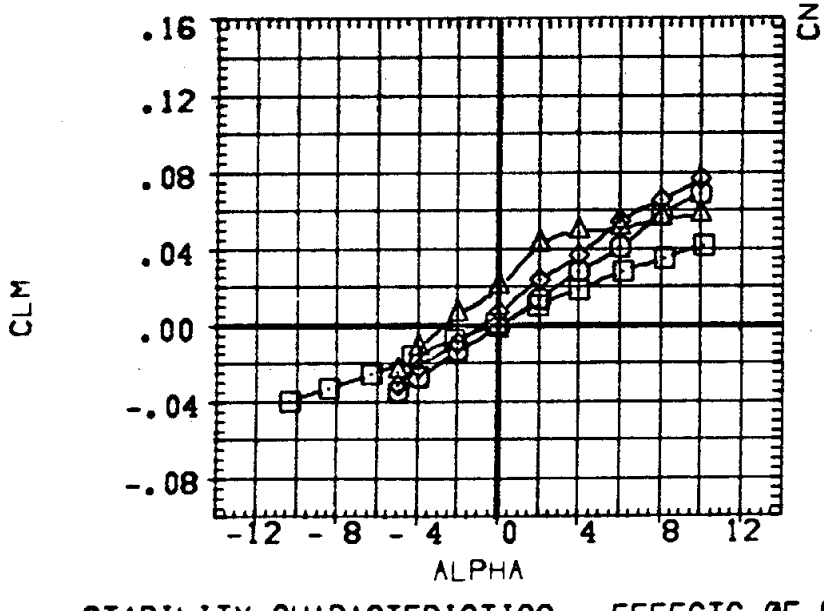
(D)MACH = 1.19

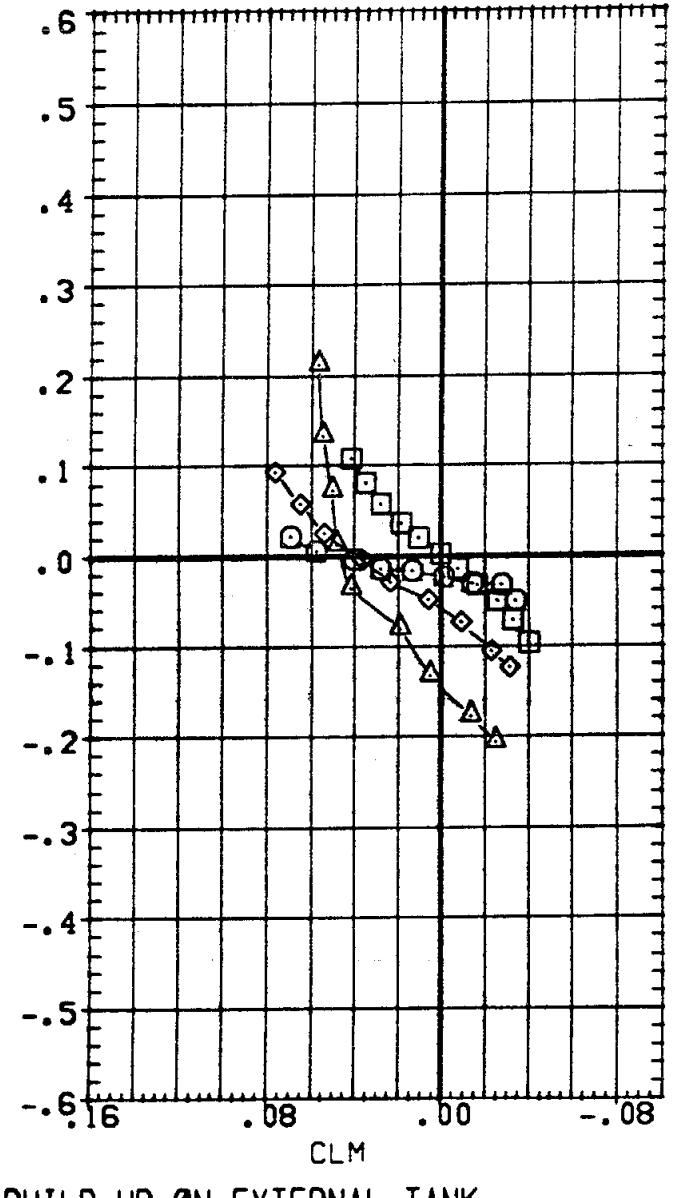
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(O1)
(A72124)	△	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)
(A72131)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (1A1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







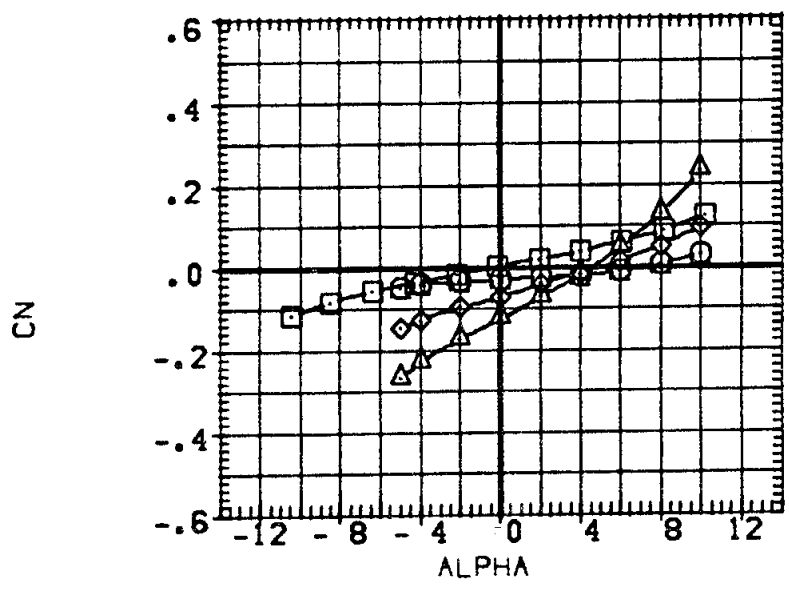
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

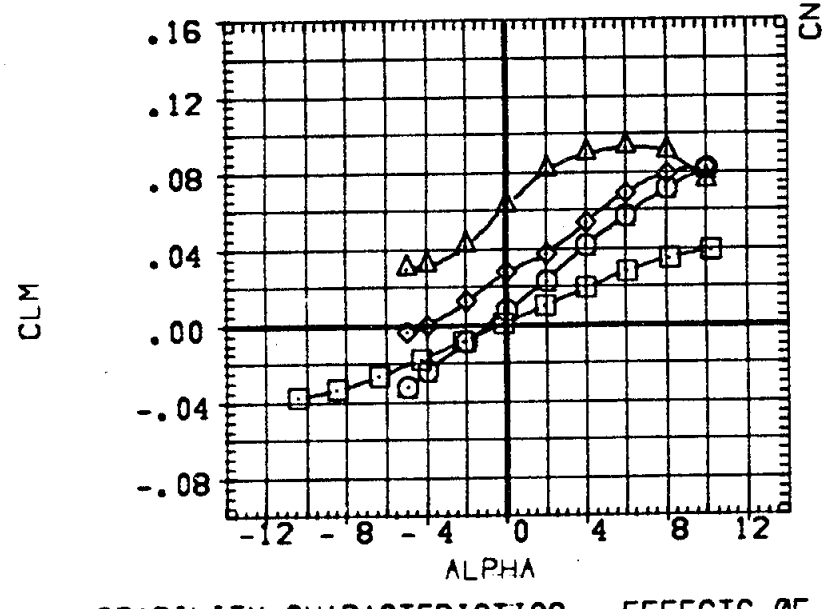
(E)MACH = 1.46

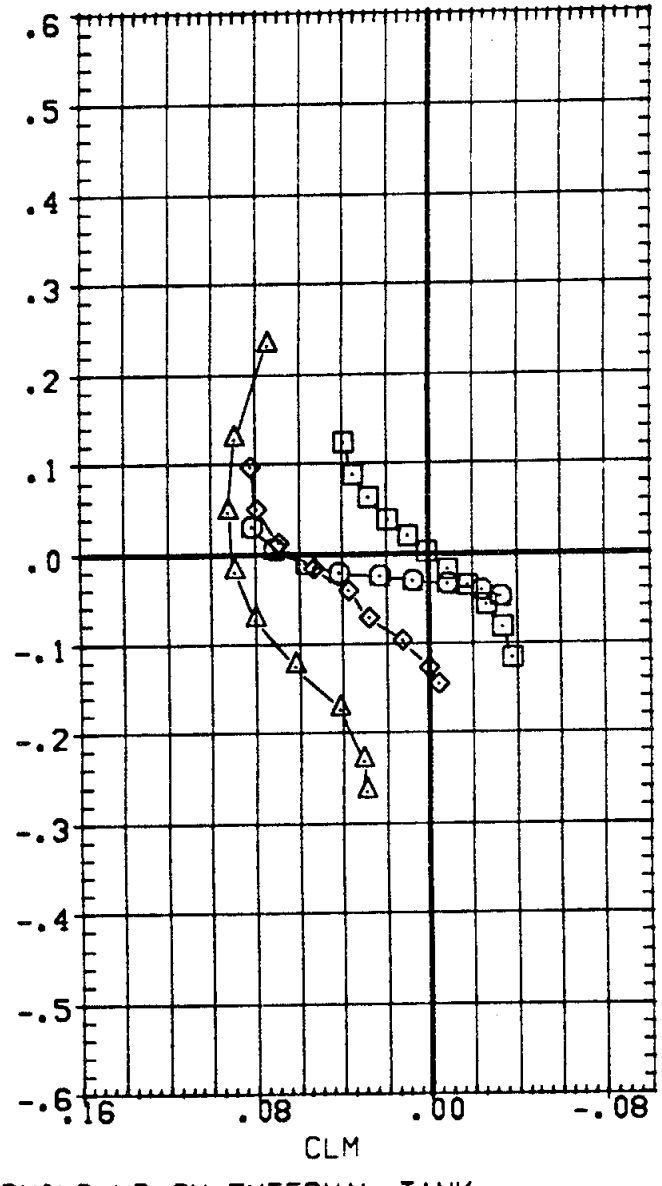
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72131)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







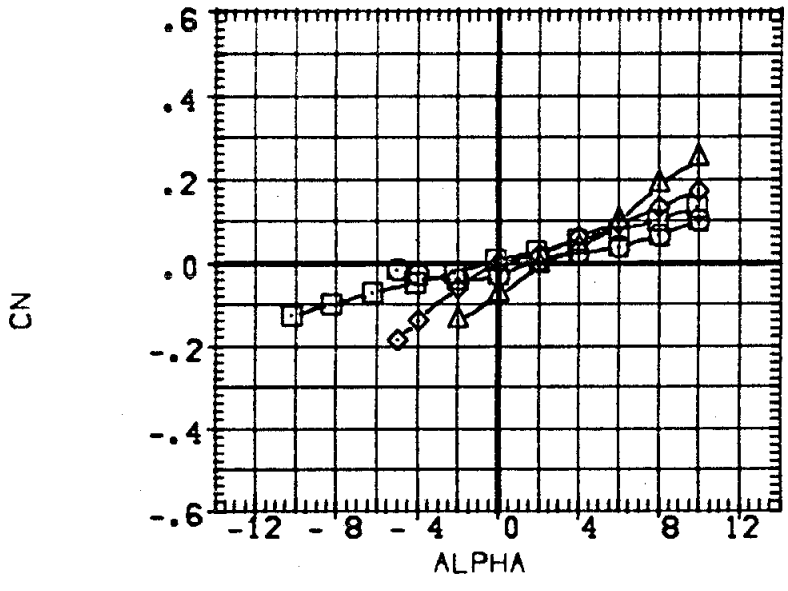
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

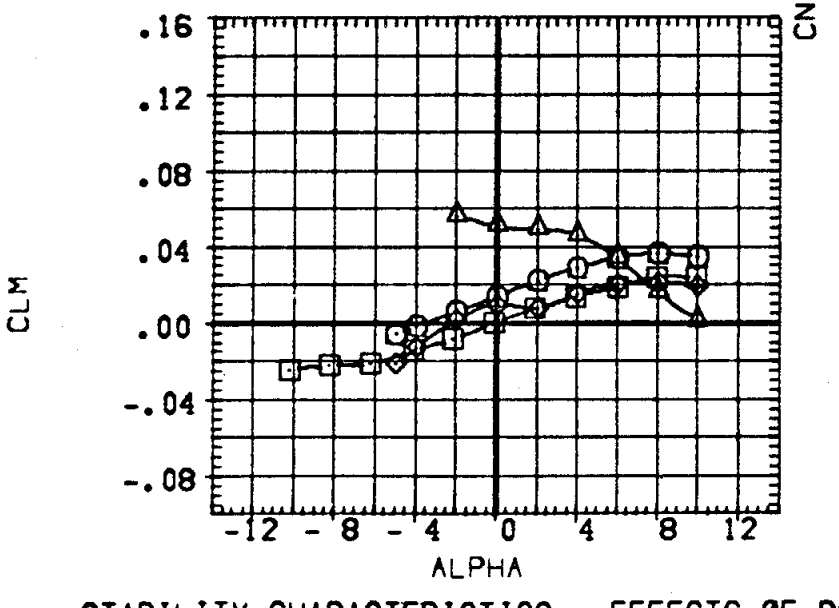
(F)MACH = 1.96

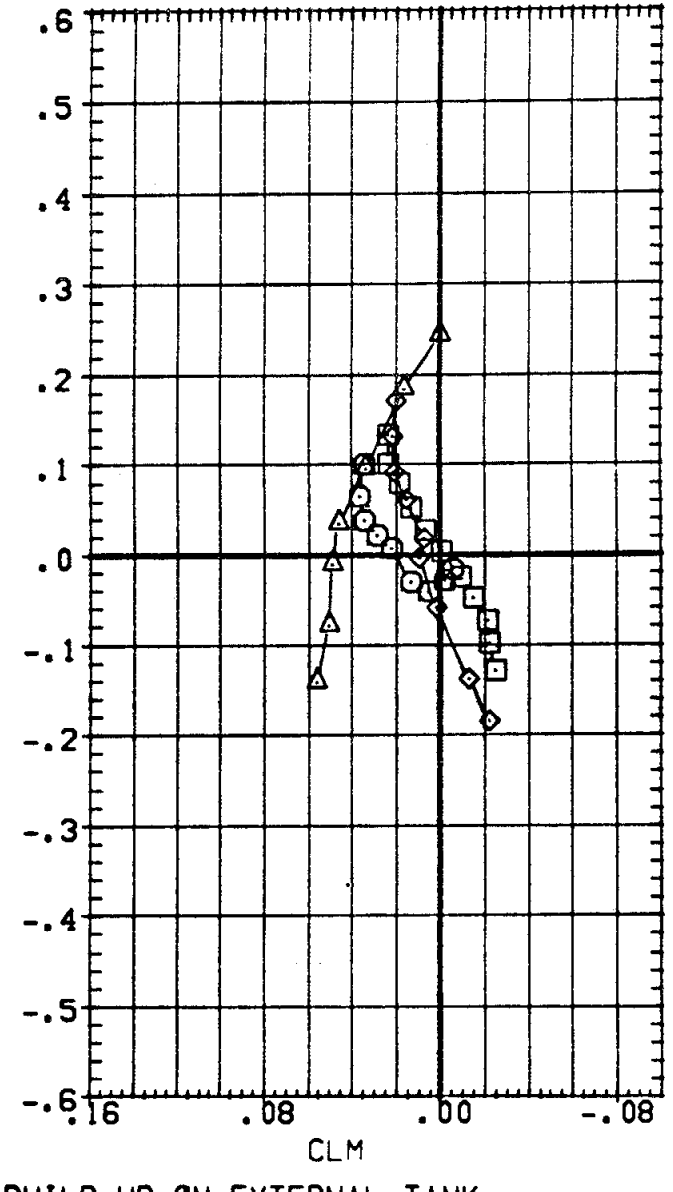
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(O1)
(A72124)	△	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)
(A72131)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (1A1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

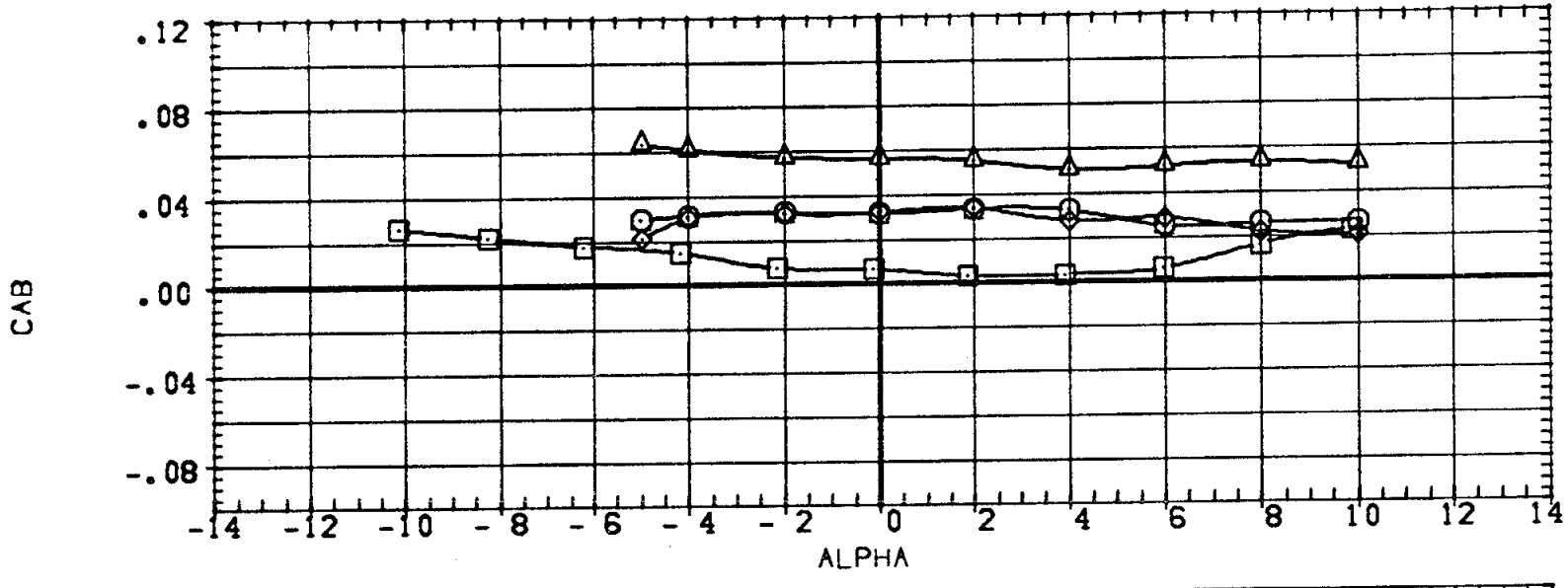
(G)MACH = 4.96

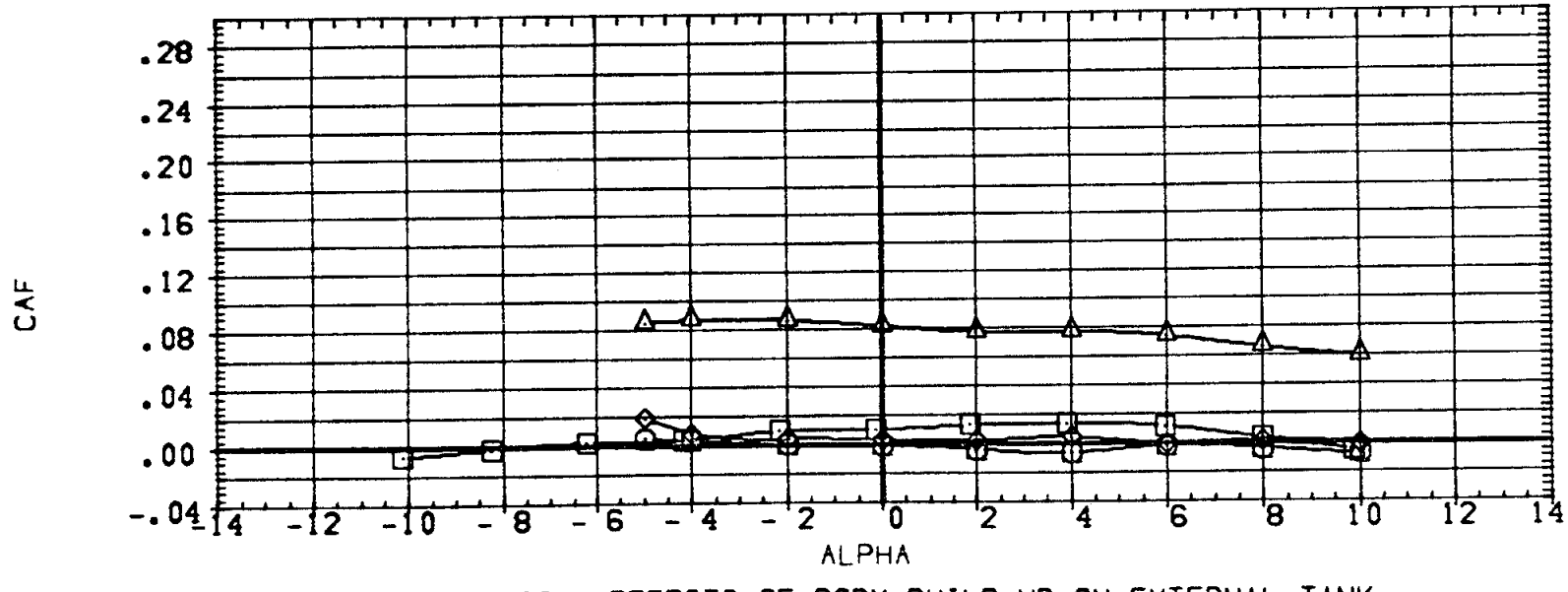
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72103)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(01)
(A72124)	⊠	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01)
(A72131)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(01)
(A72601)	□	MSFC 545 (1A1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
1.500	.120	10.000	
1.500	.120	10.000	-.624
1.500	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



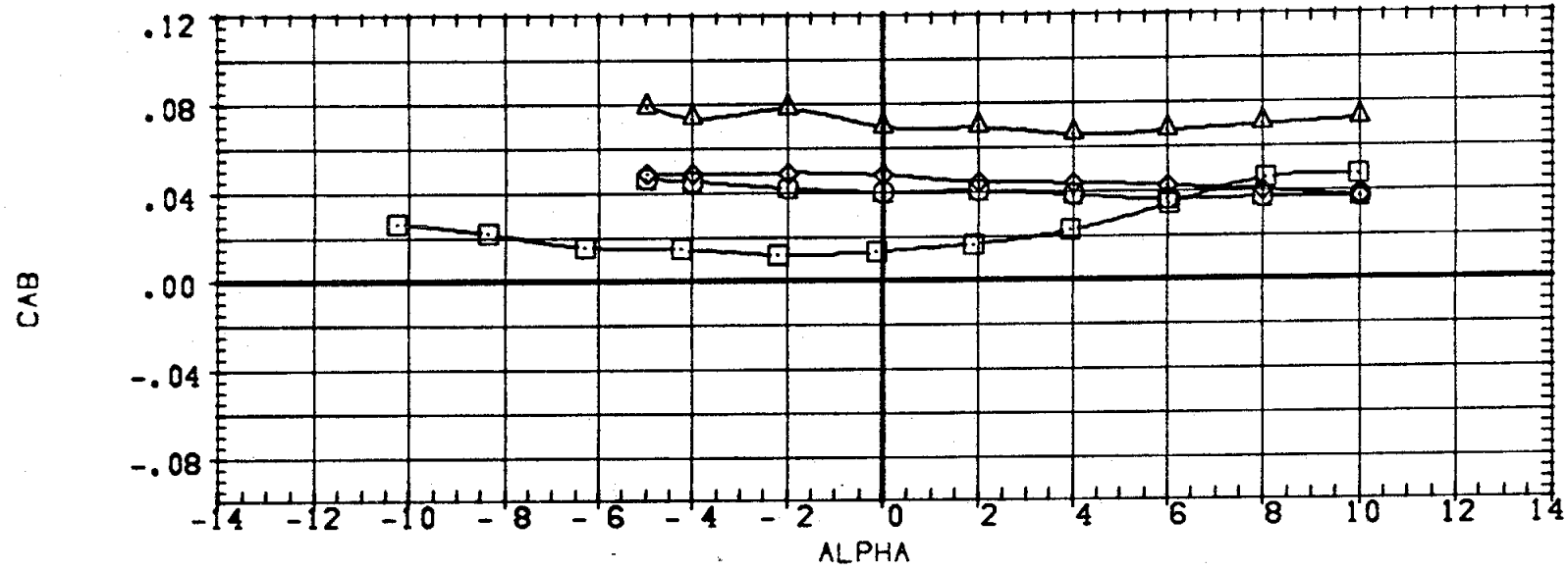


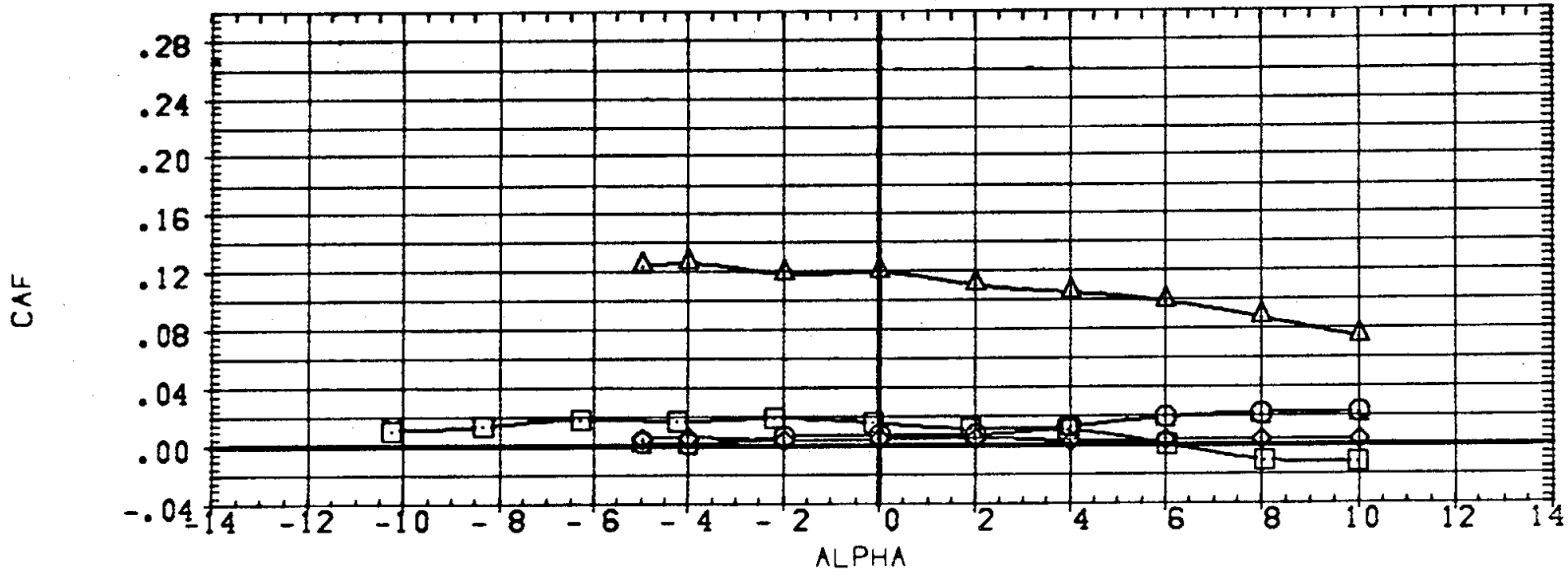
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72124)	⧖	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72131)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



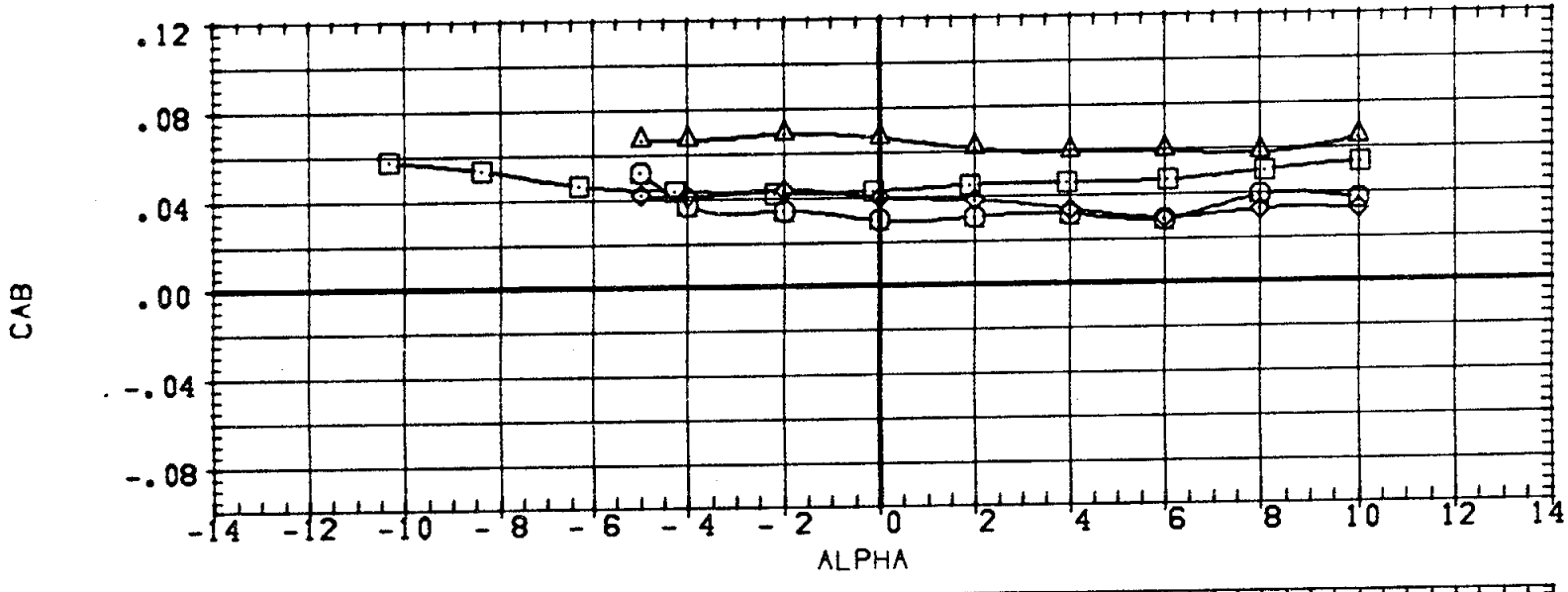


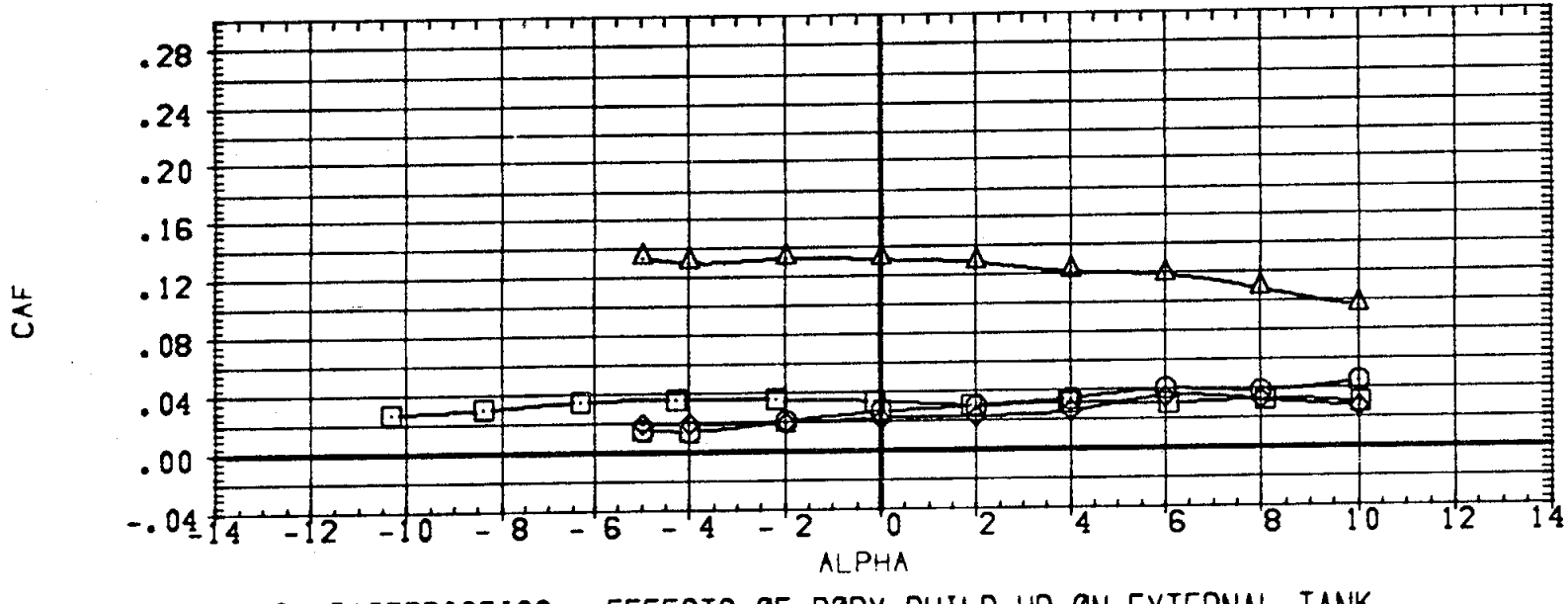
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(B)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72124)	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72131)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72601)	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



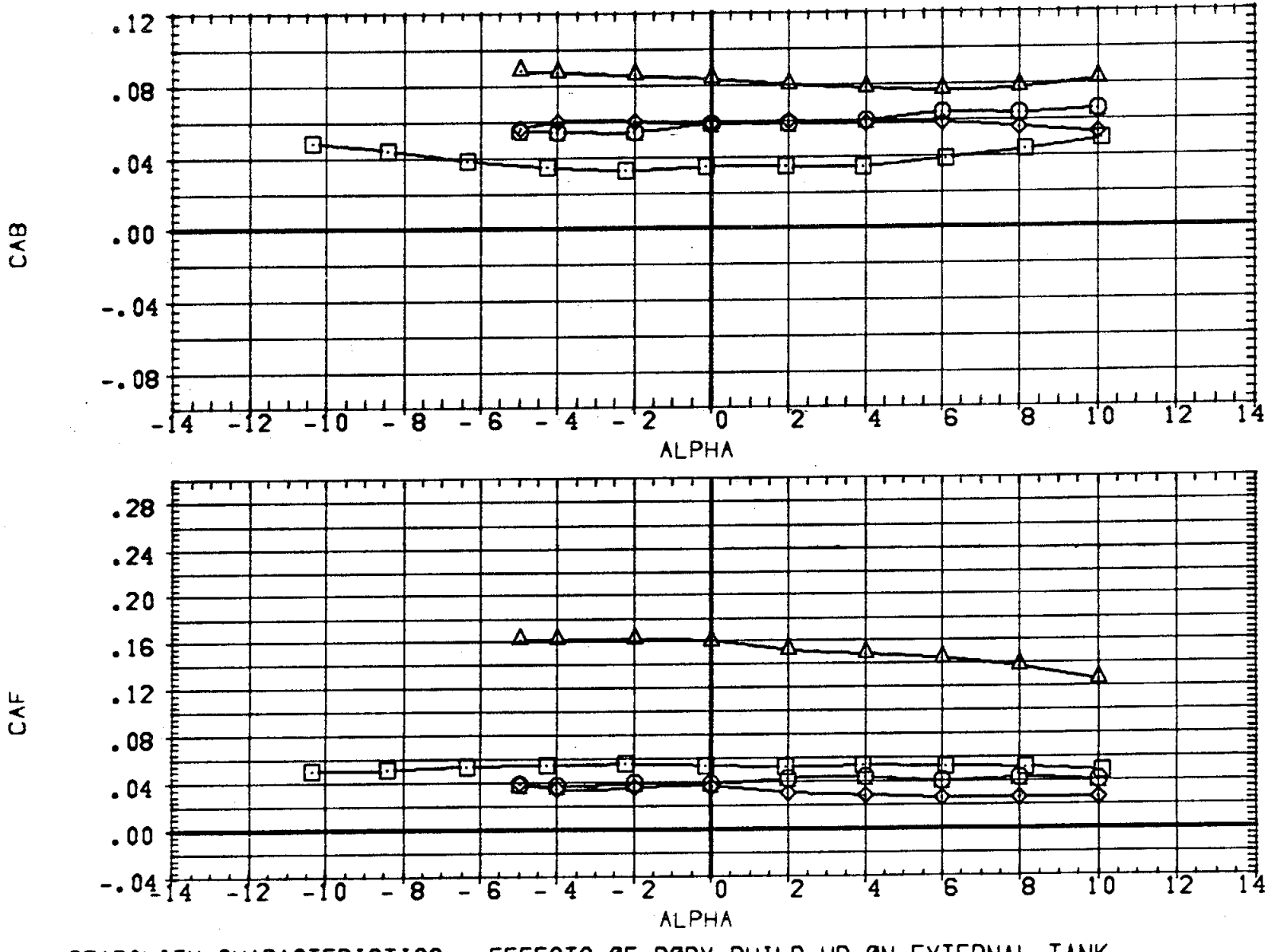


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(C)MACH = .99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72131)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



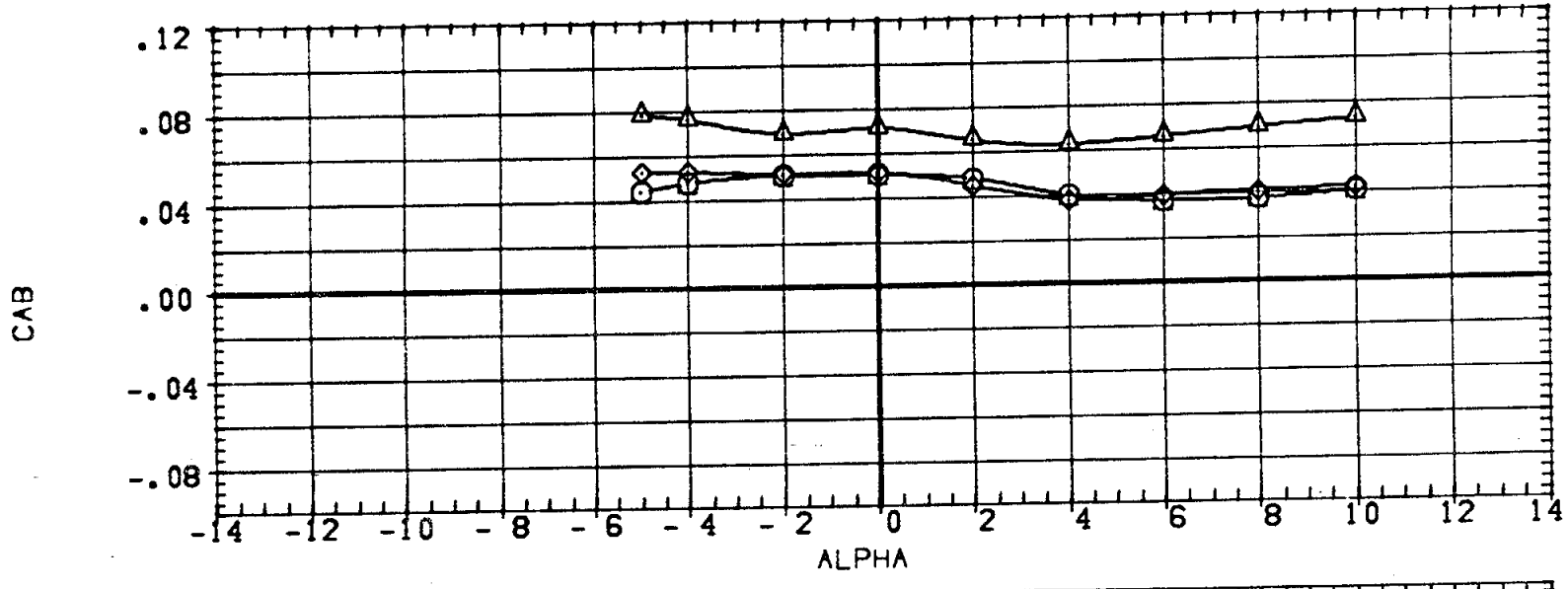
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

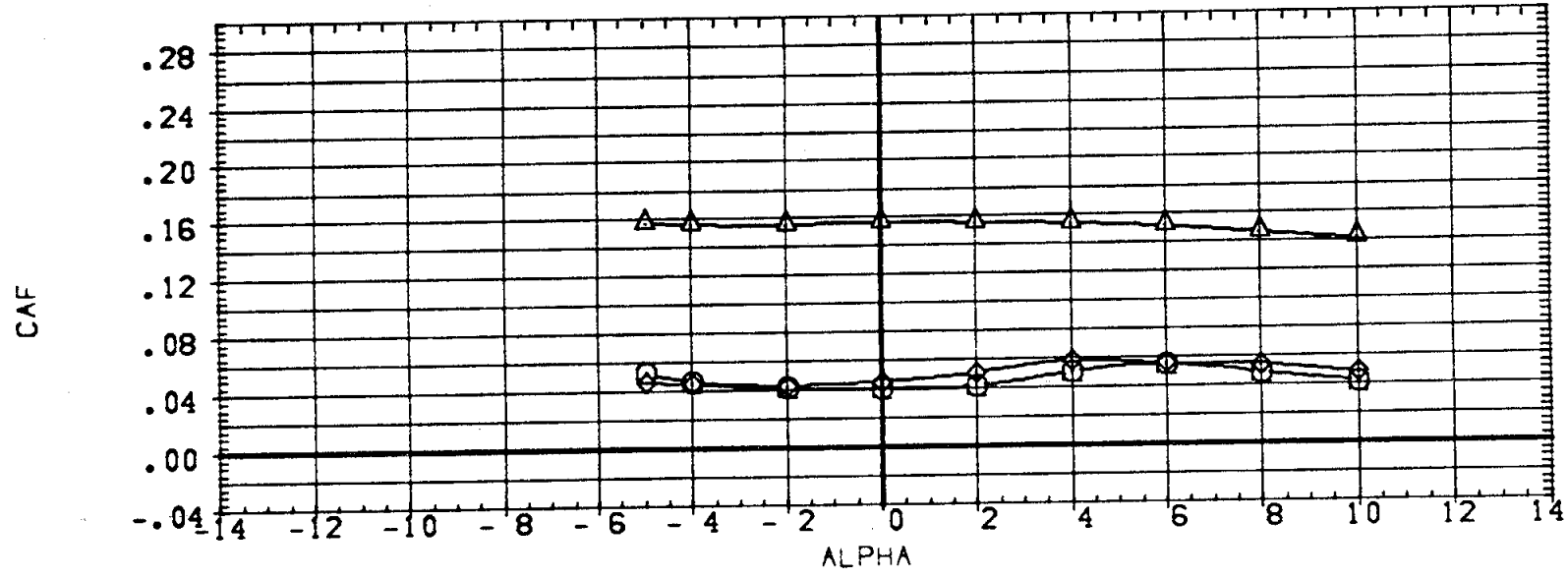
(D)MACH = 1.19

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72124)	⧖	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72131)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



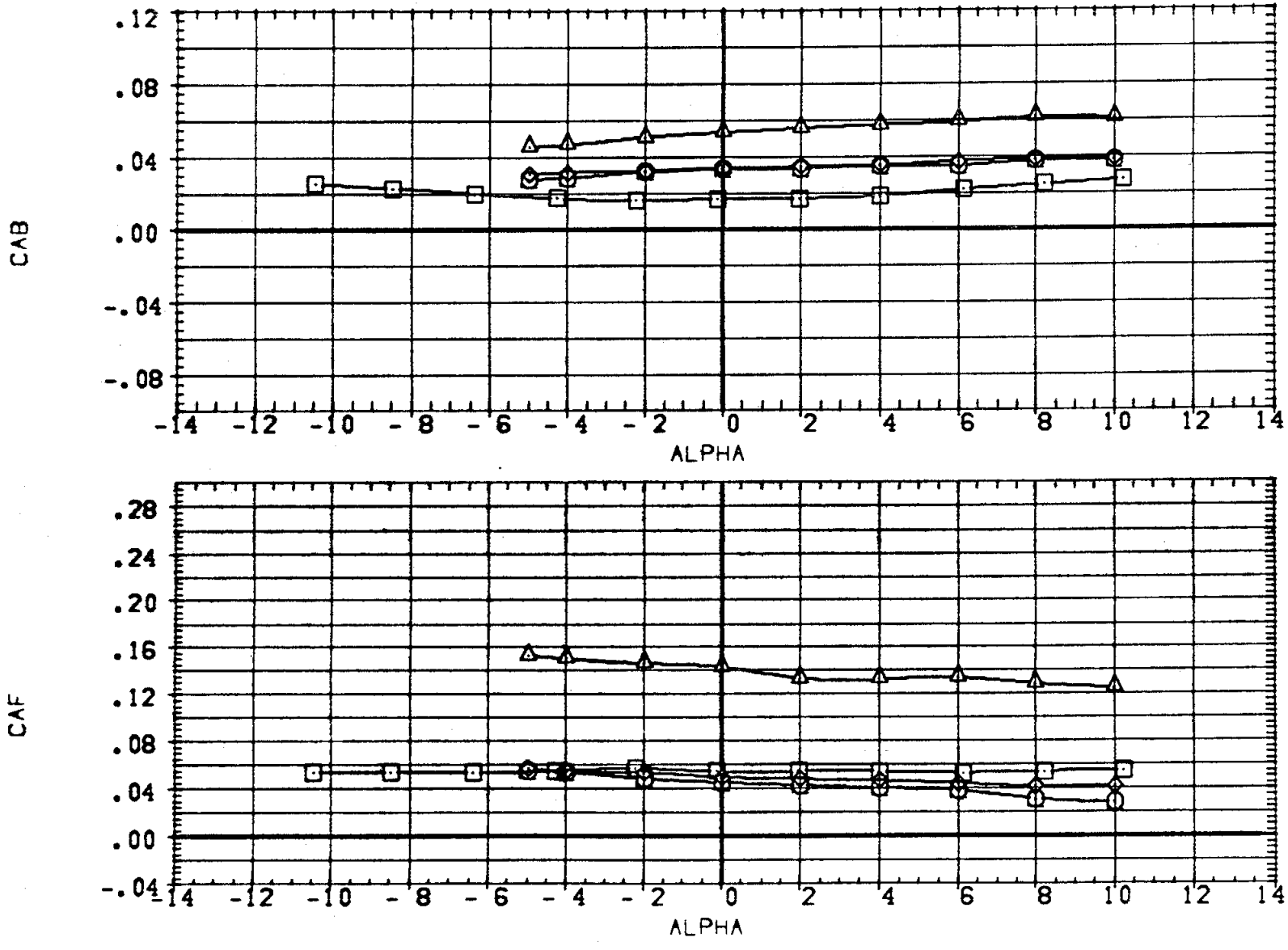


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72131)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



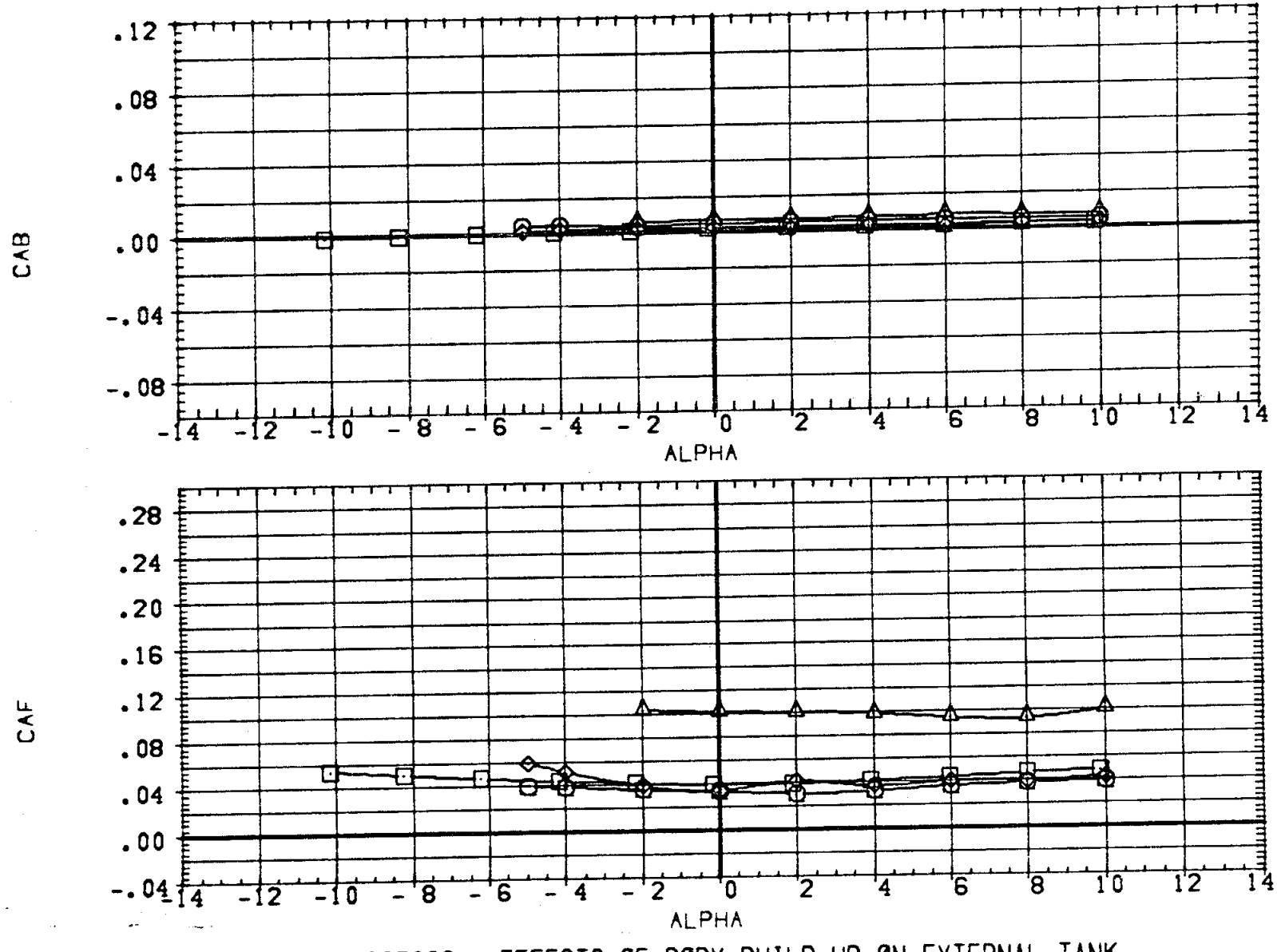
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72103)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	1.500	.120	10.000	
(A72124)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	1.500	.120	10.000	-.624
(A72131)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	1.500	.120	10.000	-.624
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

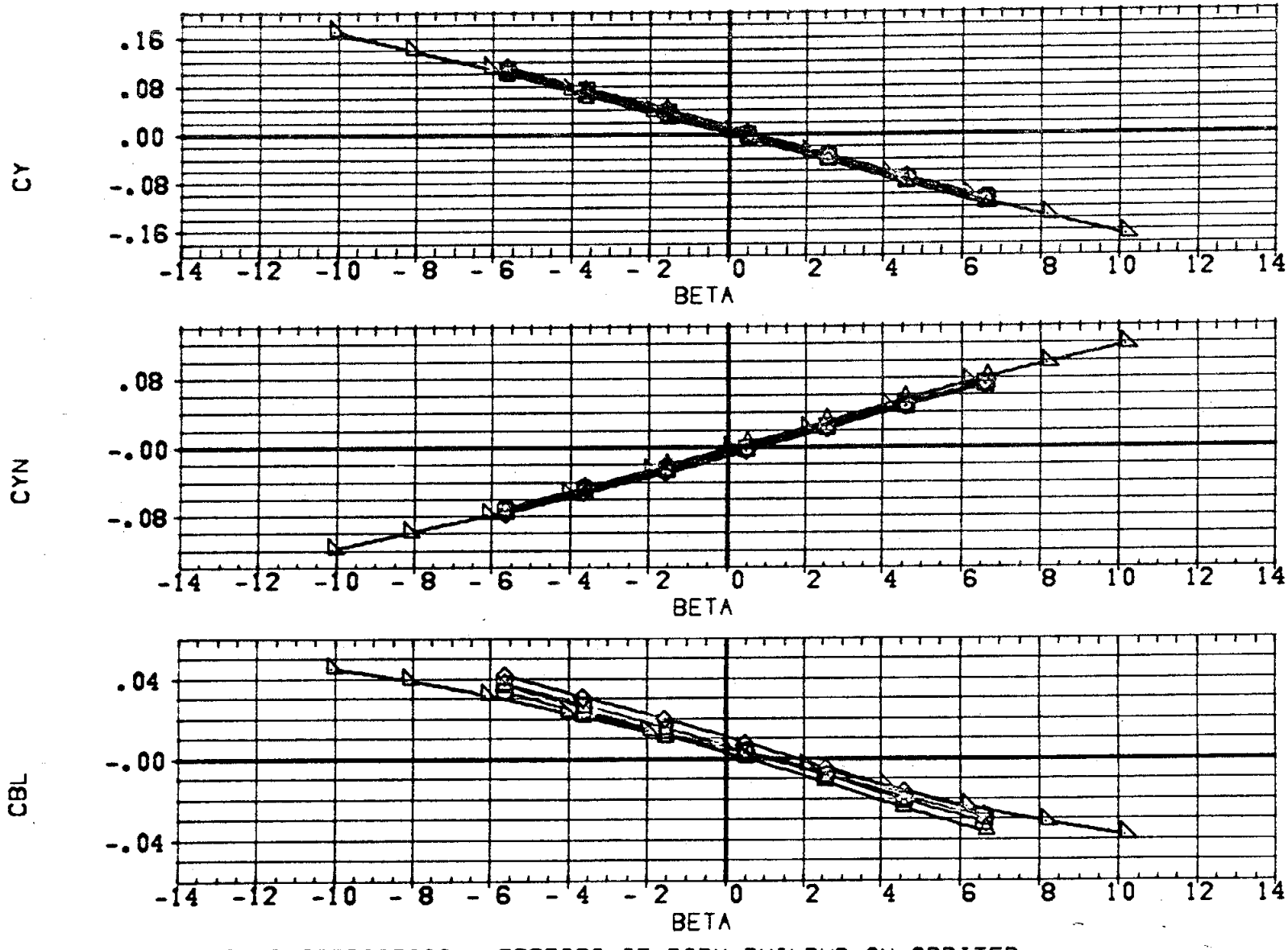


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72009)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)	0.000	0.120	10.000	
(A72014)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)(S1)	0.000	0.120	10.000	0.000
(A72042)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)(S1/2)/(S1/2)	0.000	0.120	10.000	0.000
(A72021)	▽	MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)/(S1)	0.000	0.120	10.000	0.000
(A72504)	◁	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

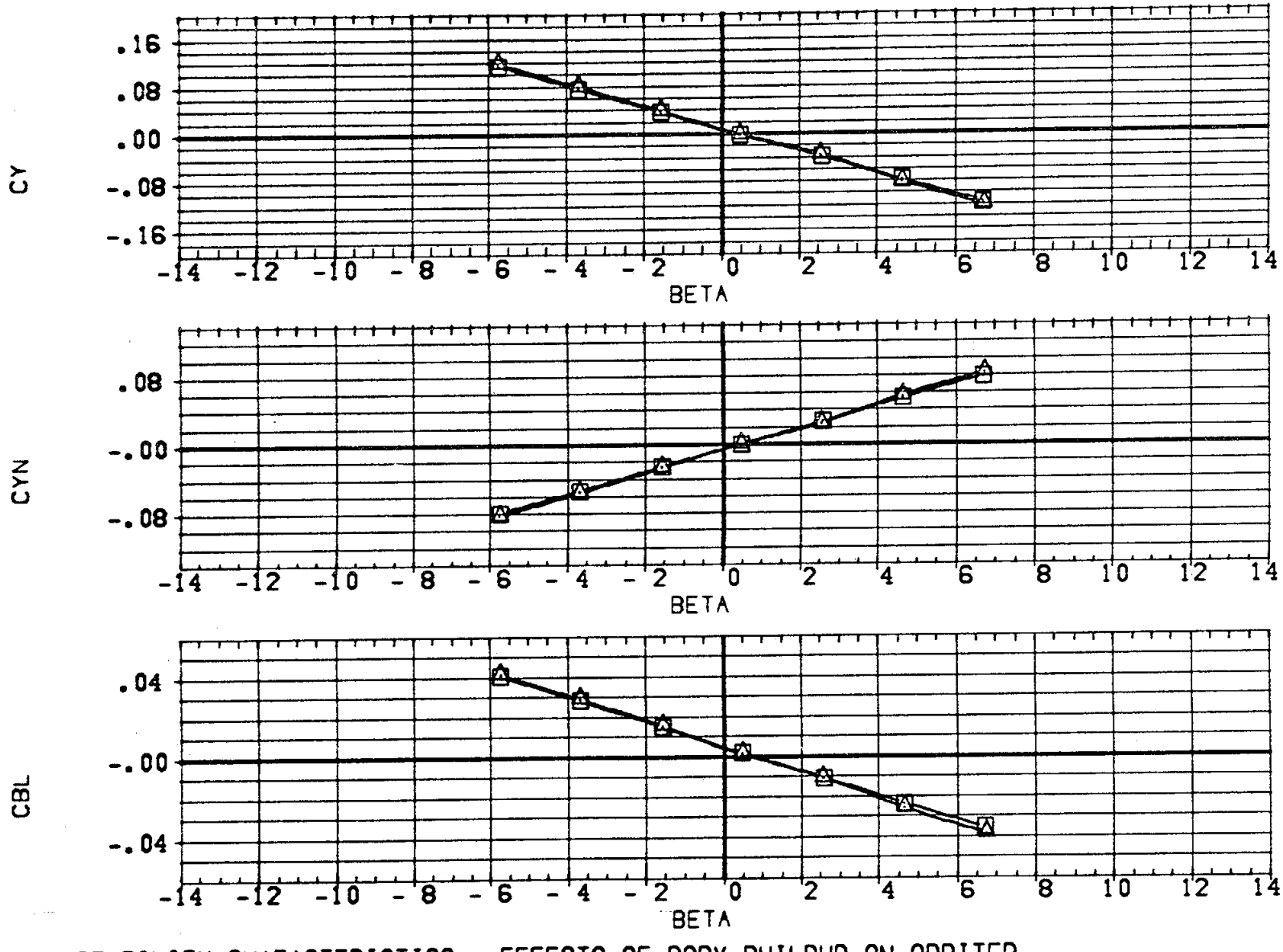
(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72009)		DATA NOT AVAILABLE
(A72014)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72042)		DATA NOT AVAILABLE
(A72021)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72504)		DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
		10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



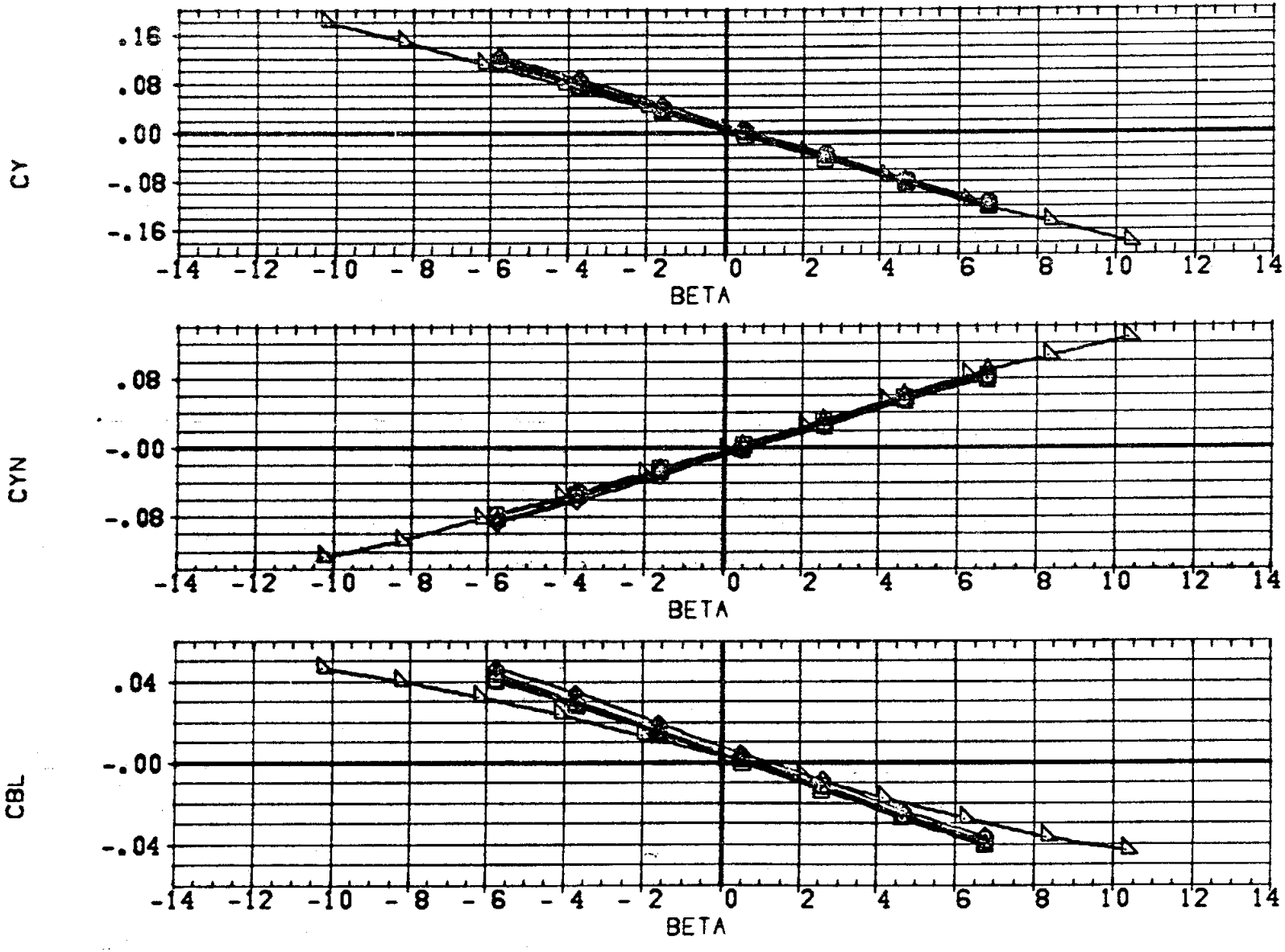
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(B)MACH = 0.80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72007)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(A72014)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	0.000
(A72042)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	0.000	0.120	10.000	0.000
(A72021)		MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	0.000
(A72504)		MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



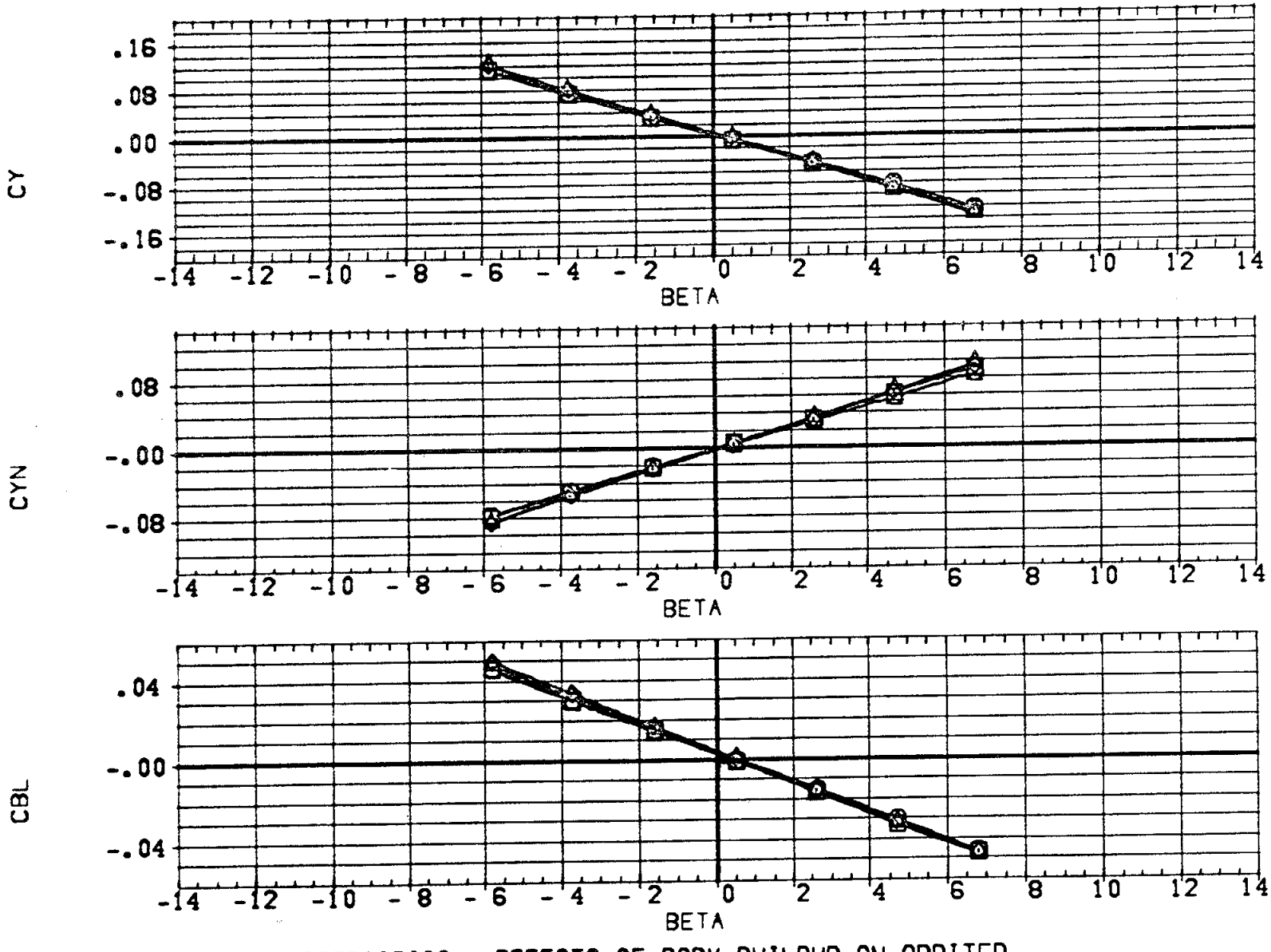
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(C)MACH = 0.90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AT2007)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(AT2014)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	0.000
(AT2042)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	0.000	0.120	10.000	0.000
(AT2021)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	0.000
(AT2504)	▽	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT

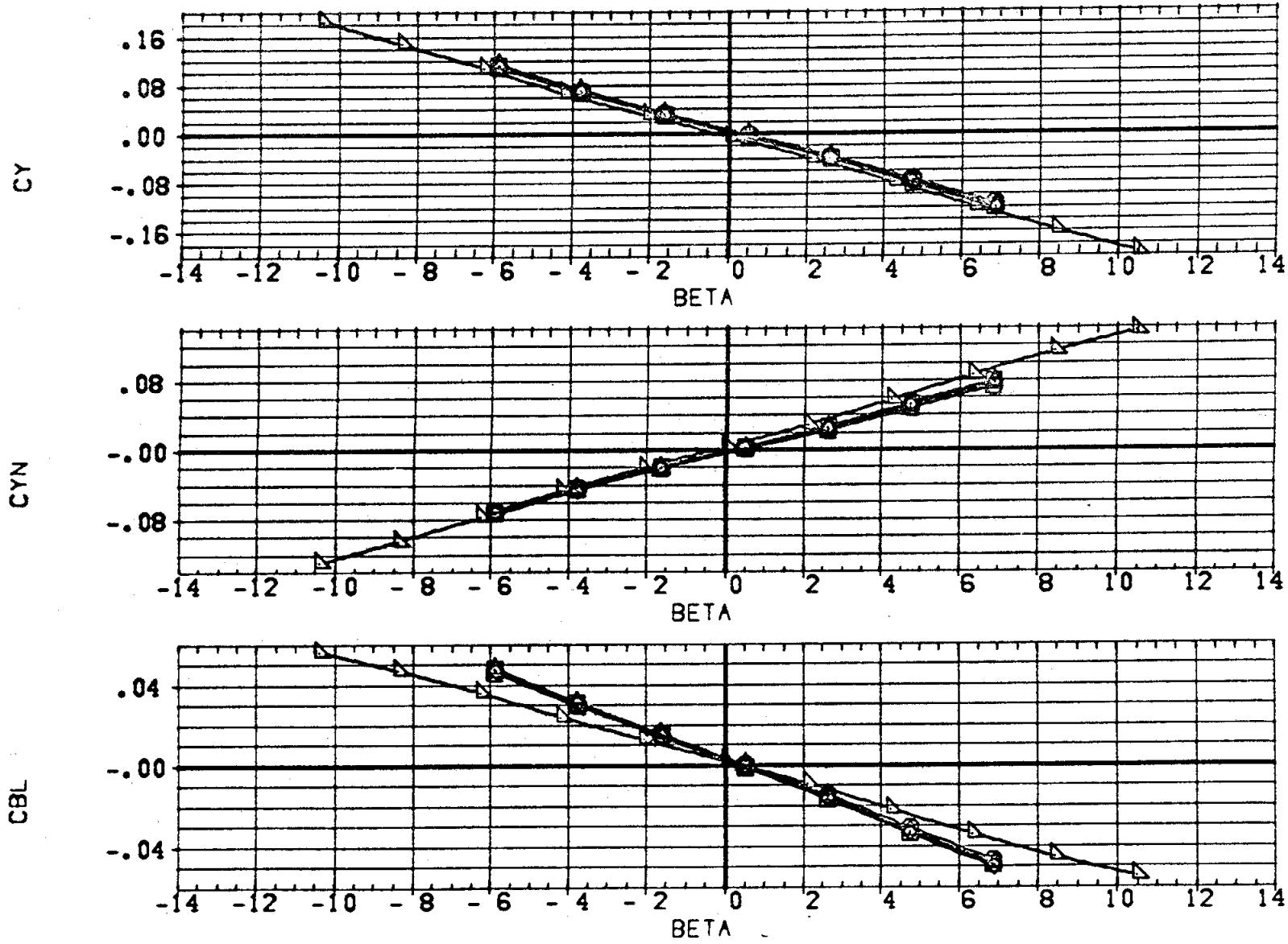


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(D)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72007)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(A72014)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	0.000
(A72042)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	0.000	0.120	10.000	0.000
(A72021)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	0.000
(A72504)	▽	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



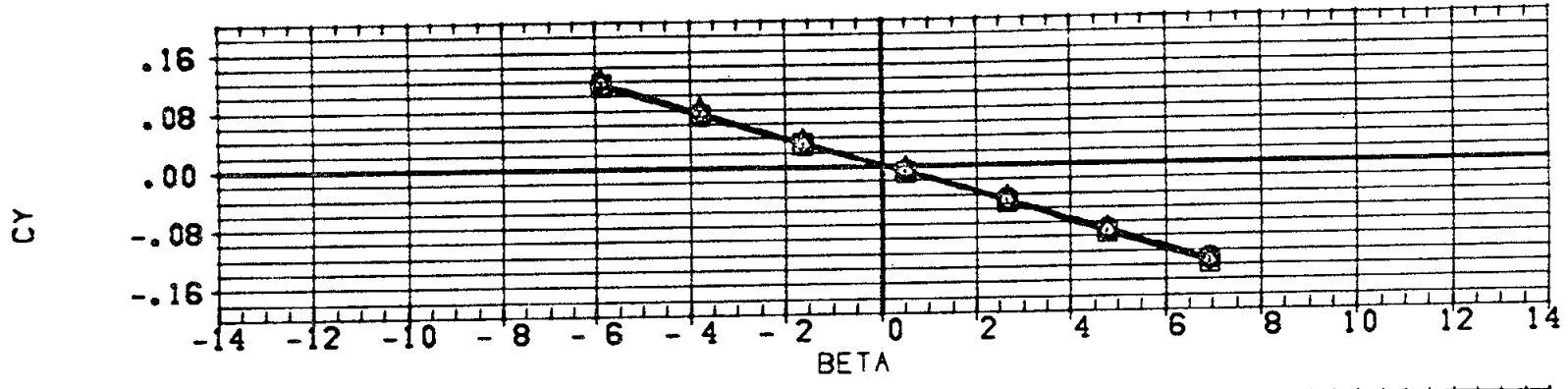
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

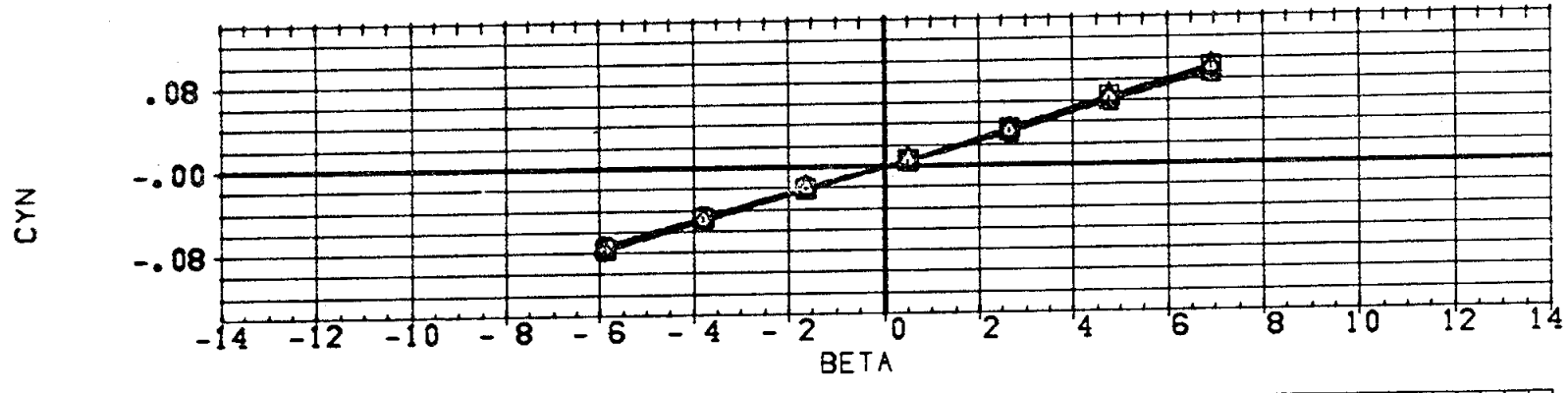
(E)MACH = 1.20

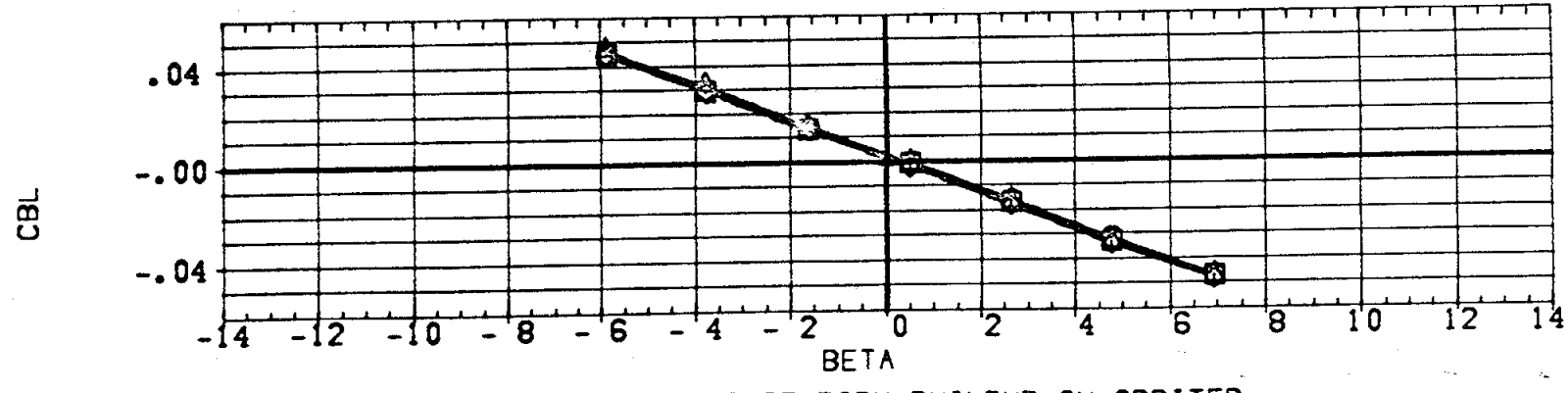
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72007)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(A72014)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	0.000
(A72042)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	0.000	0.120	10.000	0.000
(A72021)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	0.000
(A72504)	▽	DATA NOT AVAILABLE			10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







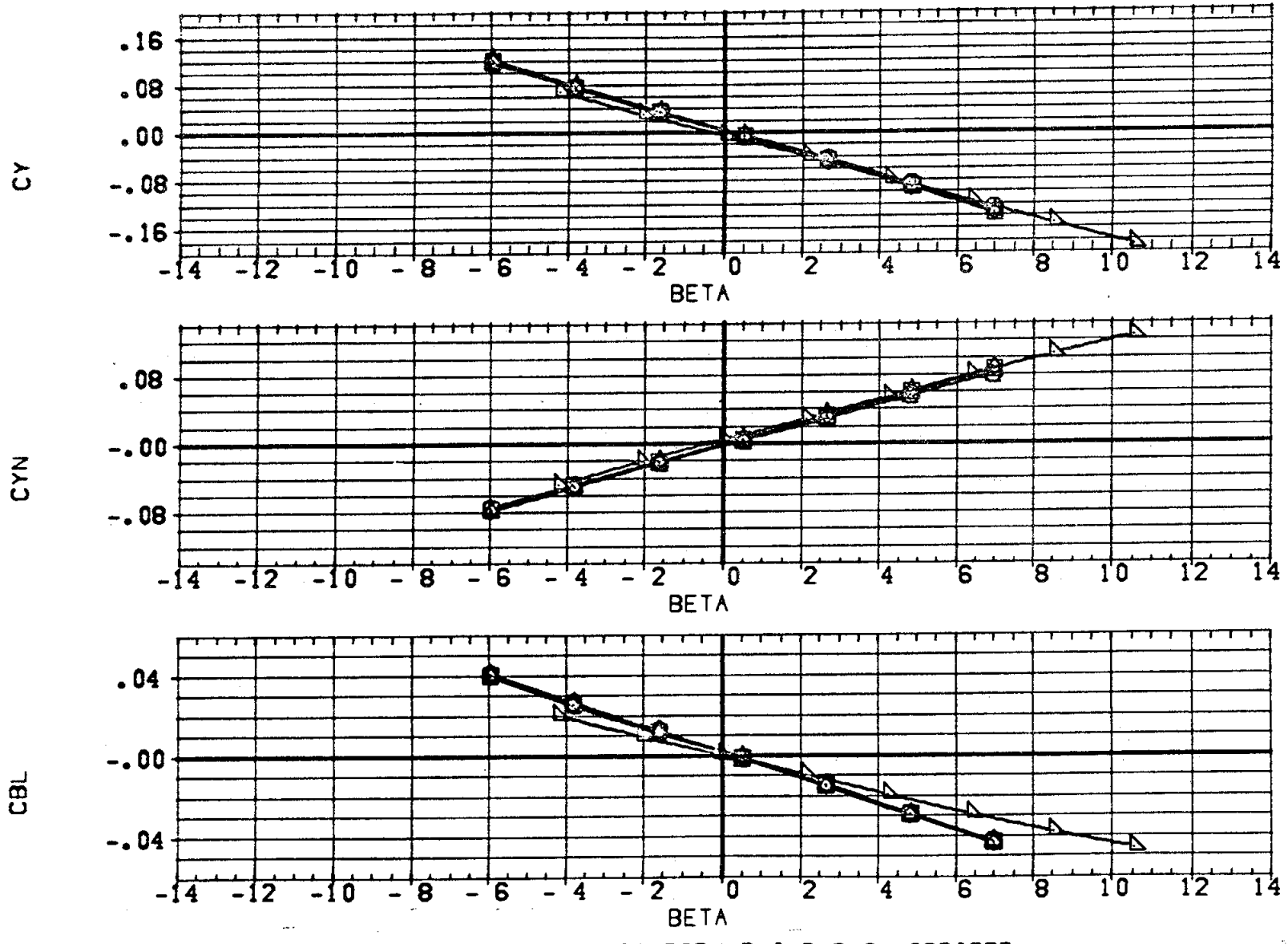
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(F)MACH = 1.47

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72007)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(A72014)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	0.000
(A72042)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	0.000	0.120	10.000	0.000
(A72021)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	0.000
(A72504)	▽	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



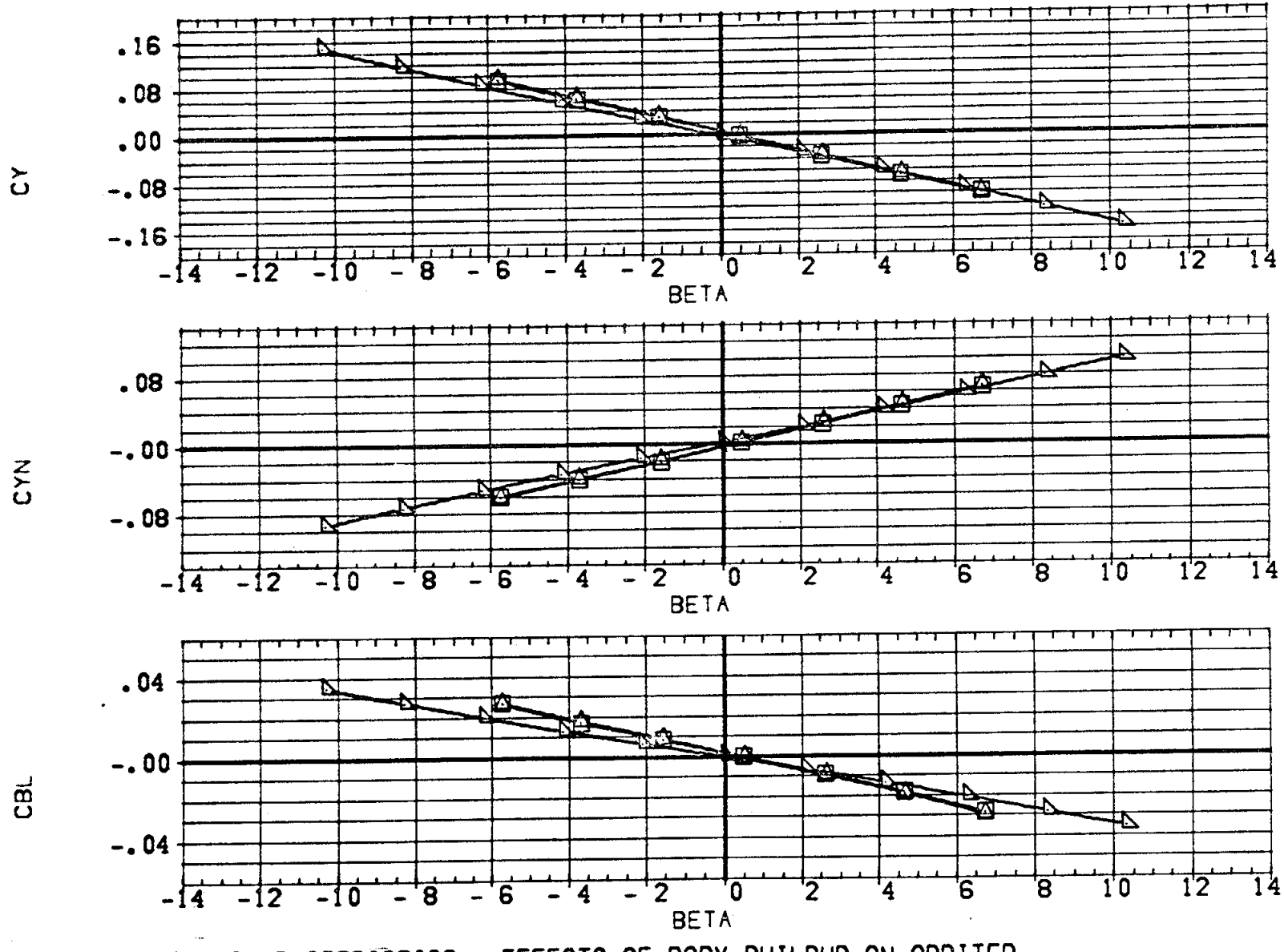
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(G)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72007)	○	DATA NOT AVAILABLE
(A72014)	△	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(A72042)	◇	DATA NOT AVAILABLE
(A72021)	□	HSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(A72504)	▽	HSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
		10.000	

REFERENCE INFORMATION		
SREF	3228.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT

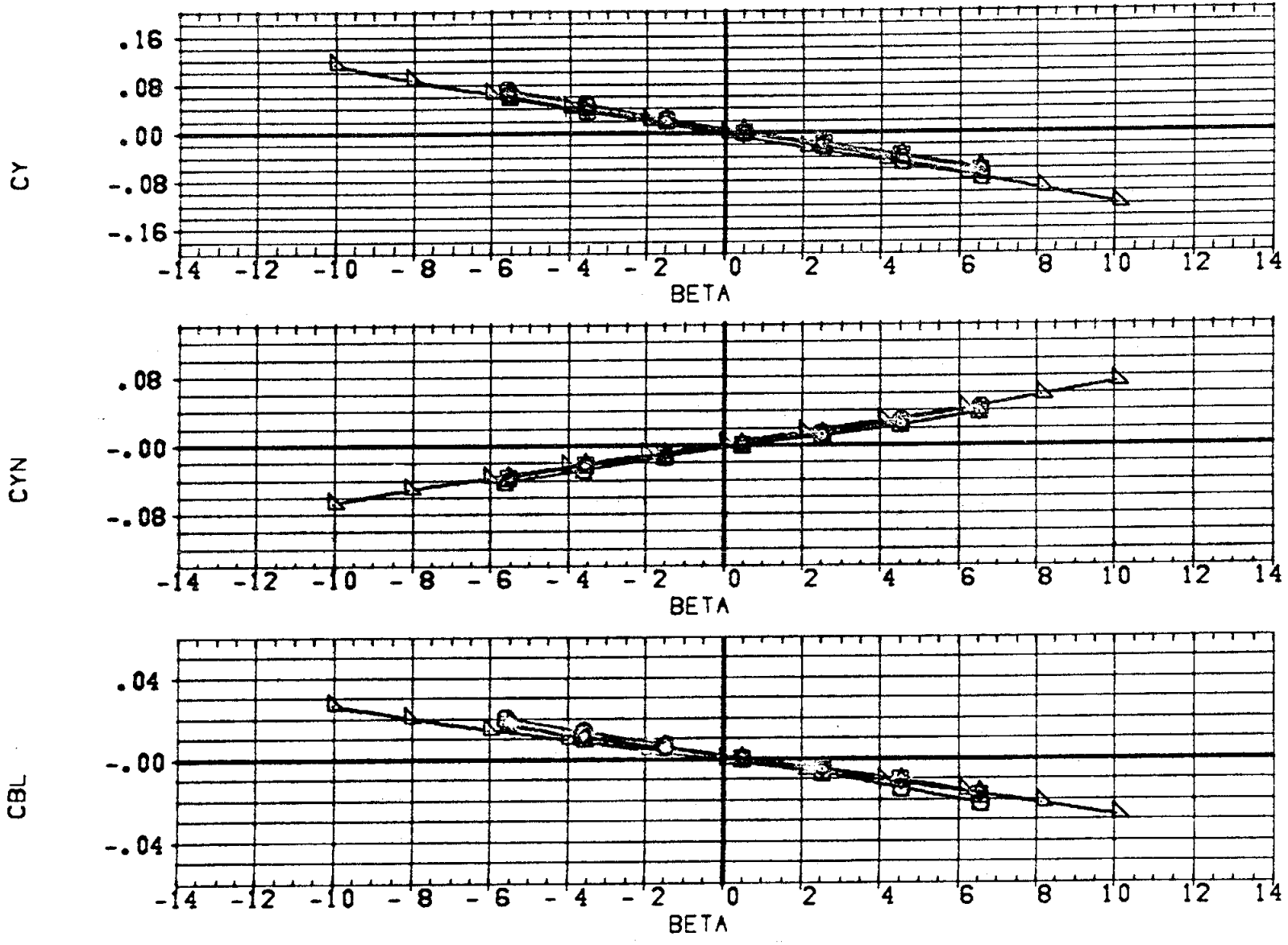


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72007)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(A72014)	□	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	0.000
(A72042)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2)	0.000	0.120	10.000	0.000
(A72021)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	0.000
(A72504)	▽	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

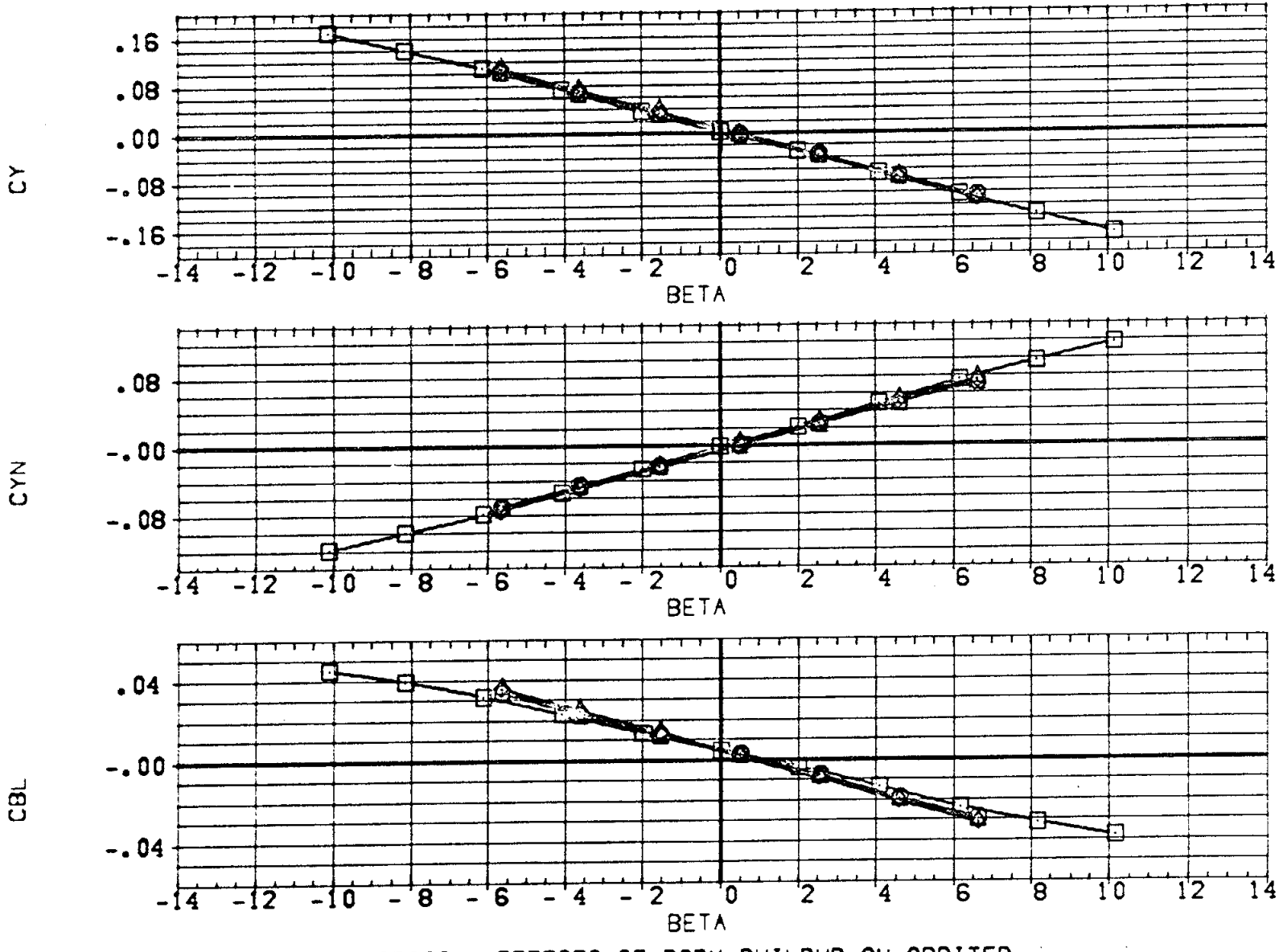
(1)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72007)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)
(A72026)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1)
(A72035)		MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)
(A72504)		MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



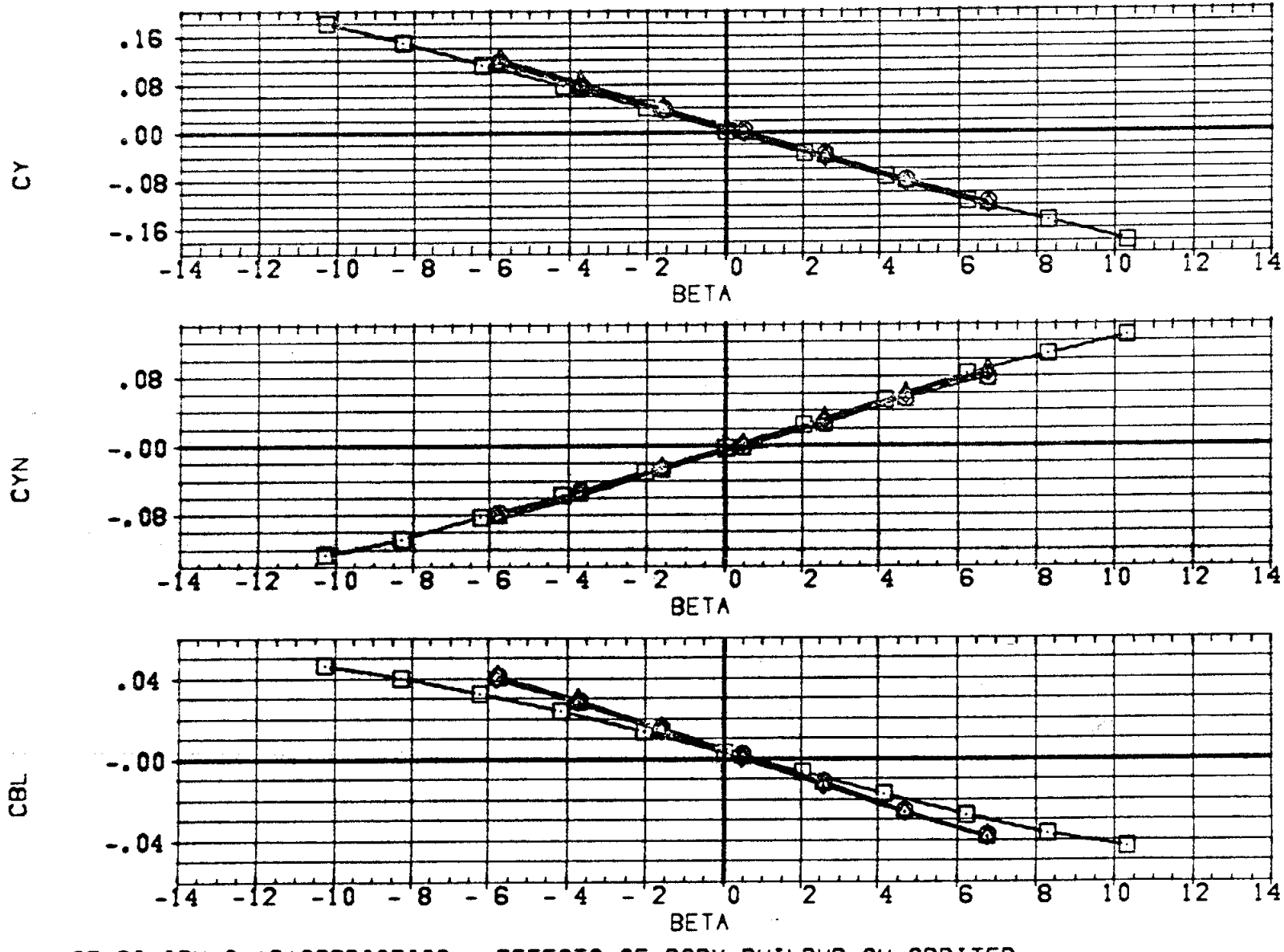
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72007)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(A72028)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	-0.624
(A72035)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	-0.624
(A72504)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1326.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

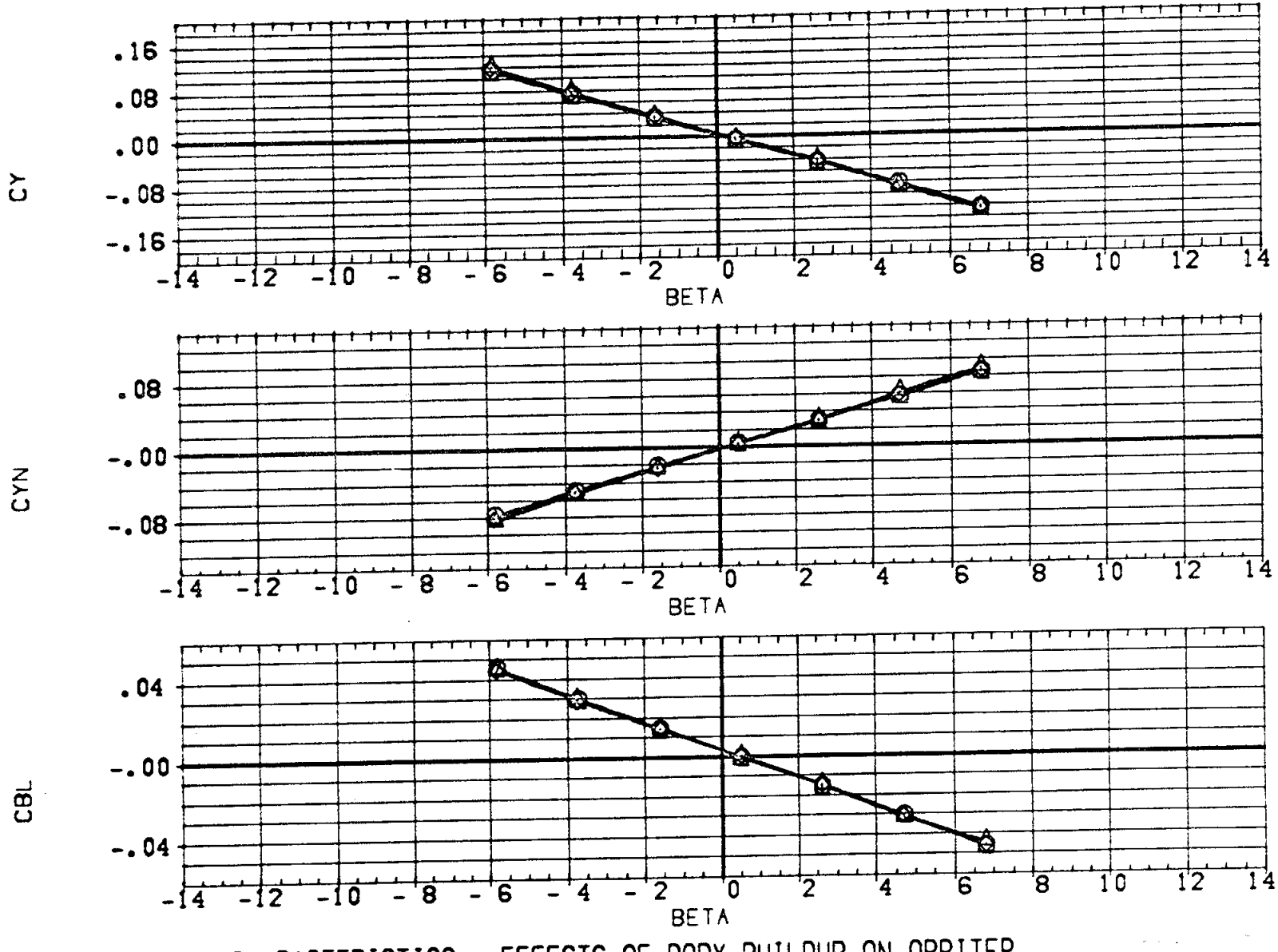
(B)MACH = 0.90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AYE007)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)
(AYE026)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)
(AYE035)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)
(AYE504)	□	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT

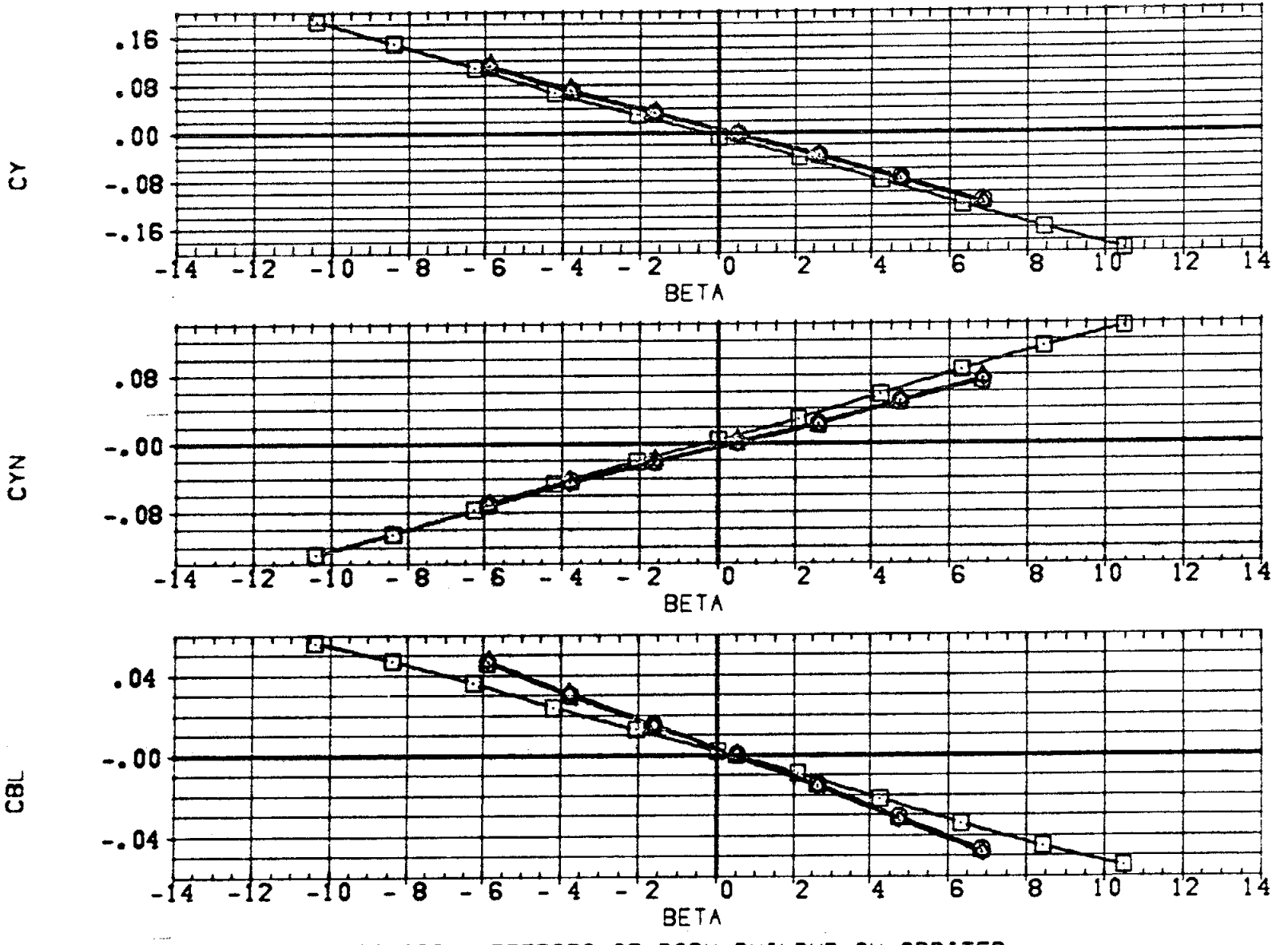


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72009)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(A72026)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	-0.624
(A72033)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	-0.624
(A72504)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

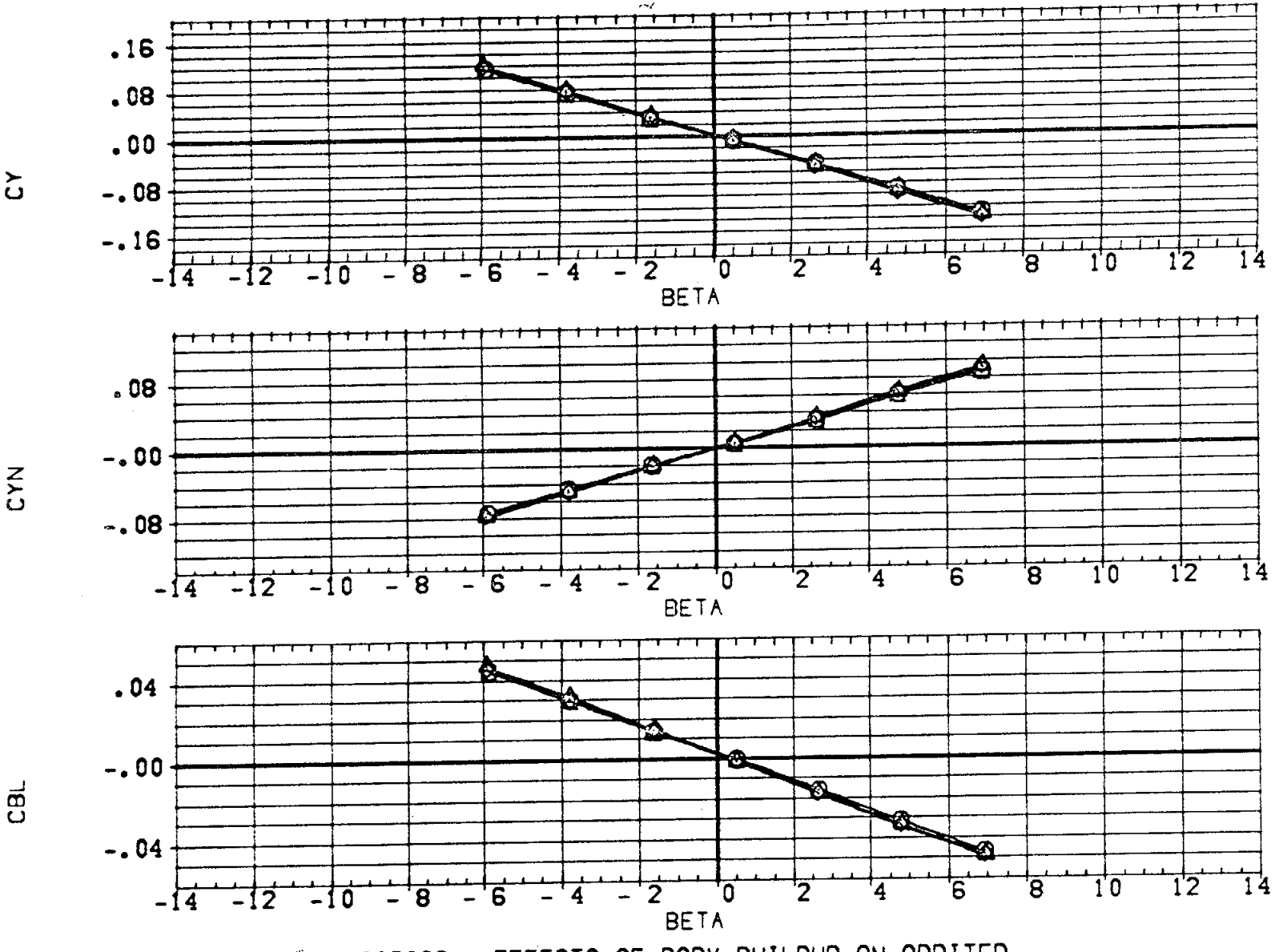
(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2007)	○	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)
(AP2026)	△	MSFC 545 (1A1) MOD ATP LV-(O1)/(T5)(S1)
(AP2035)	◇	MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1)
(AP2504)	□	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



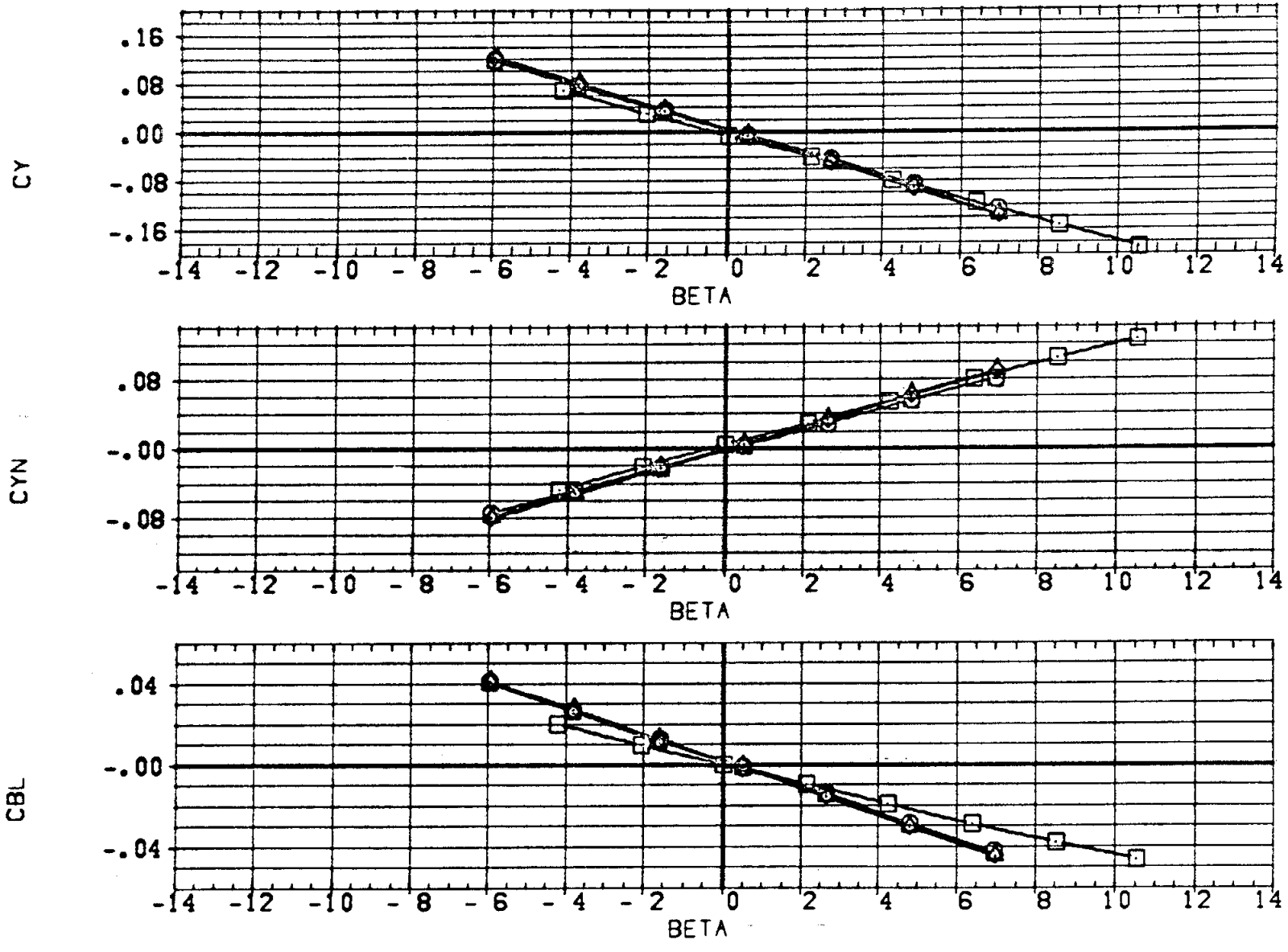
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(E)MACH = 1.47

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72007)	○	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(A72028)	△	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	-0.624
(A72035)	◇	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	-0.624
(A72504)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

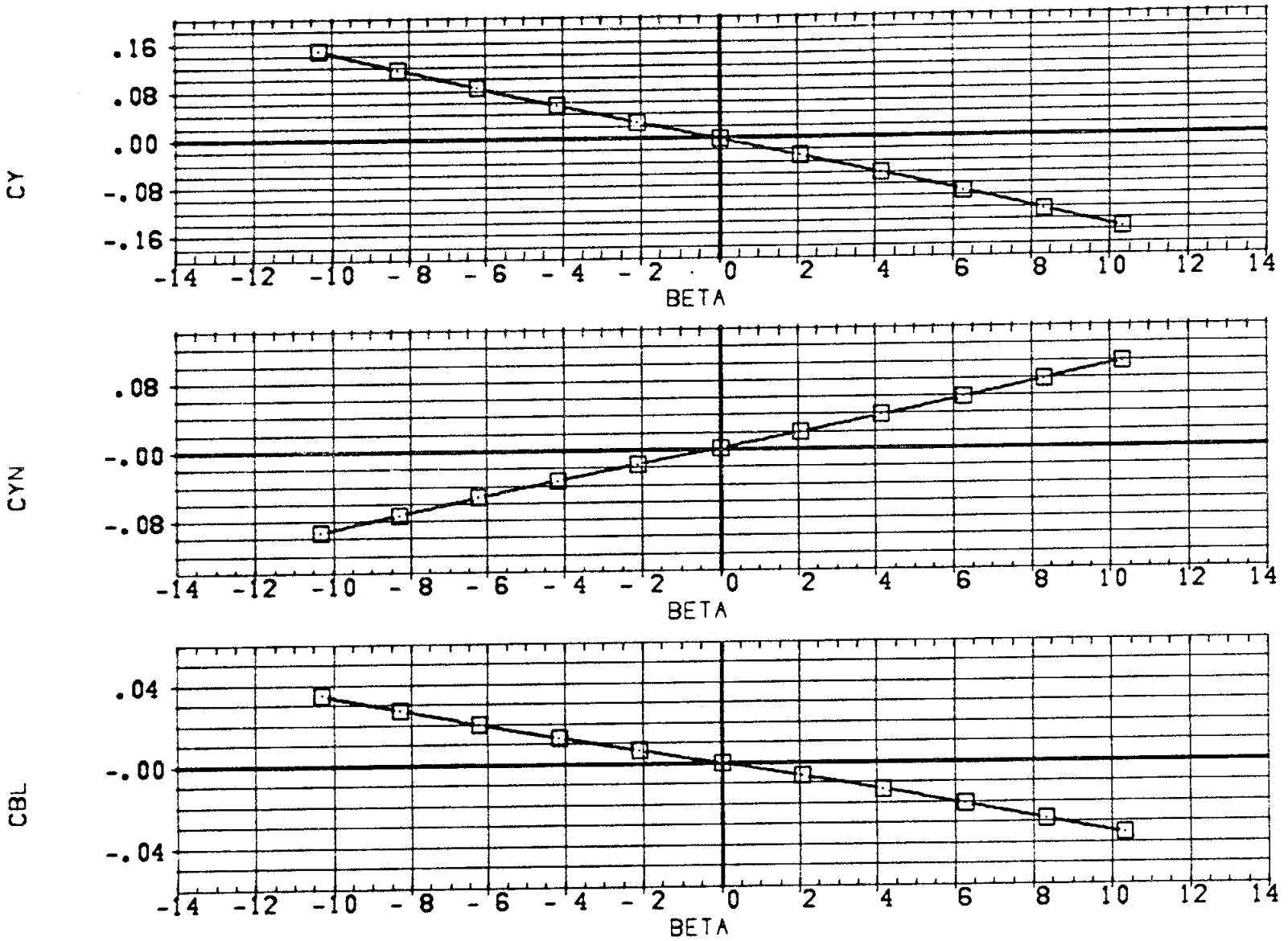
(F)MACH = 1.95

DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72007)	○	DATA NOT AVAILABLE
(A72026)	⊠	DATA NOT AVAILABLE
(A72035)	◇	DATA NOT AVAILABLE
(A72504)	□	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624
		10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



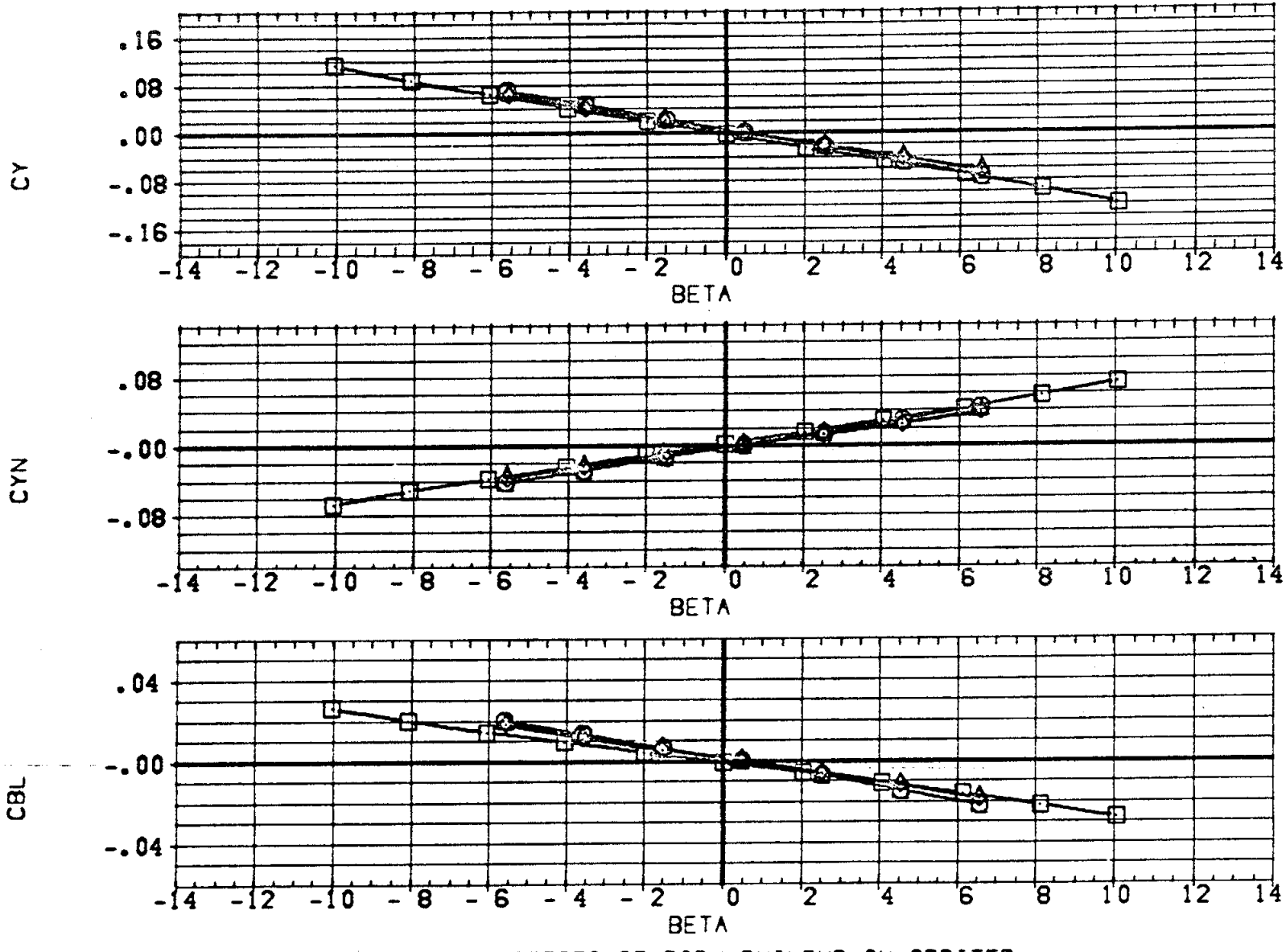
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(G)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AF2007)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)	0.000	0.120	10.000	
(AF2026)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1)	0.000	0.120	10.000	-0.624
(AF2035)	MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1)	0.000	0.120	10.000	-0.624
(AF2504)	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)			10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



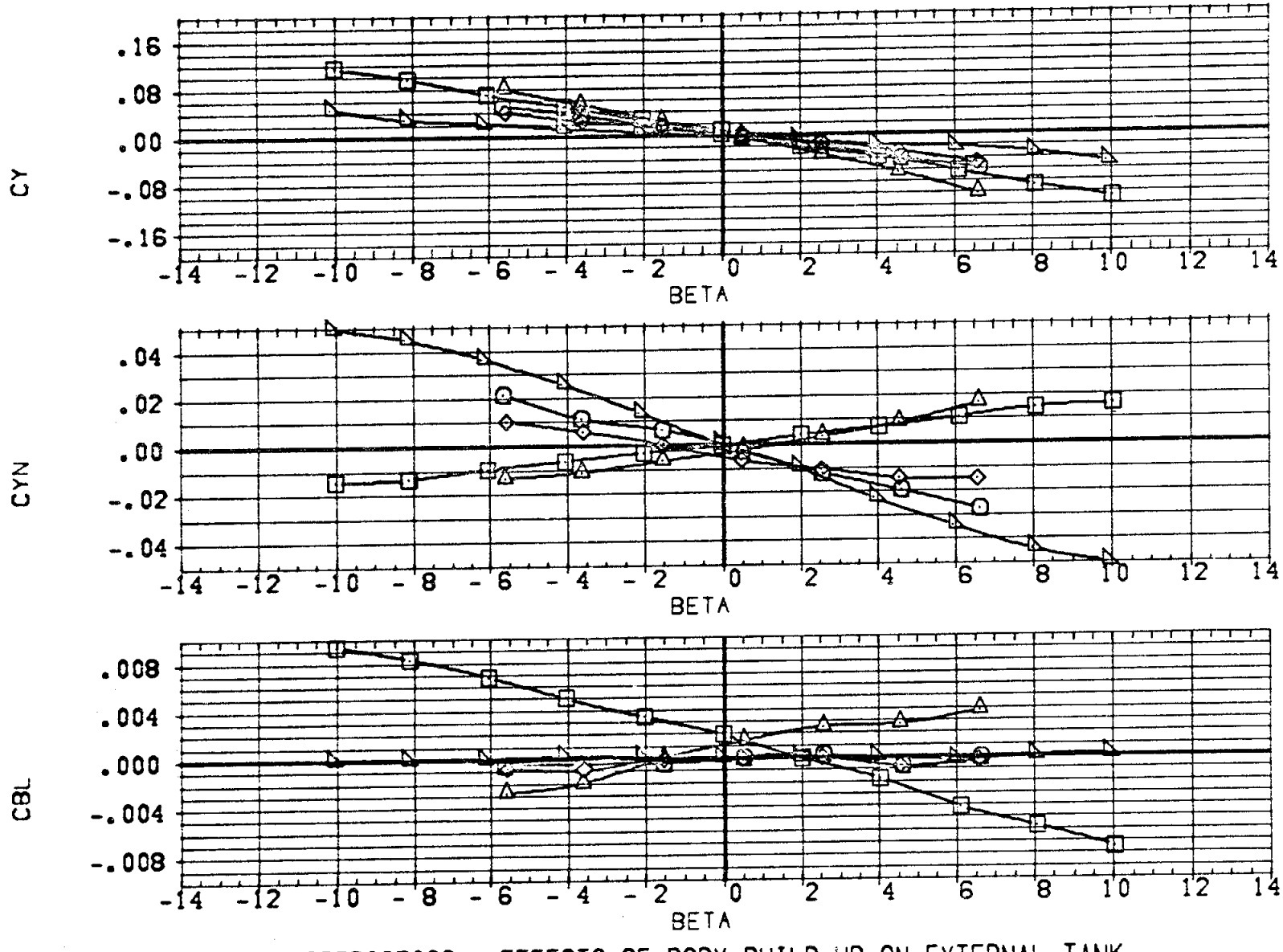
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILDUP ON ORBITER

(H)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	□	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72114)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72121)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	⊠	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72602)	⊿	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
			0.000

REFERENCE INFORMATION		
SREF	3280.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT

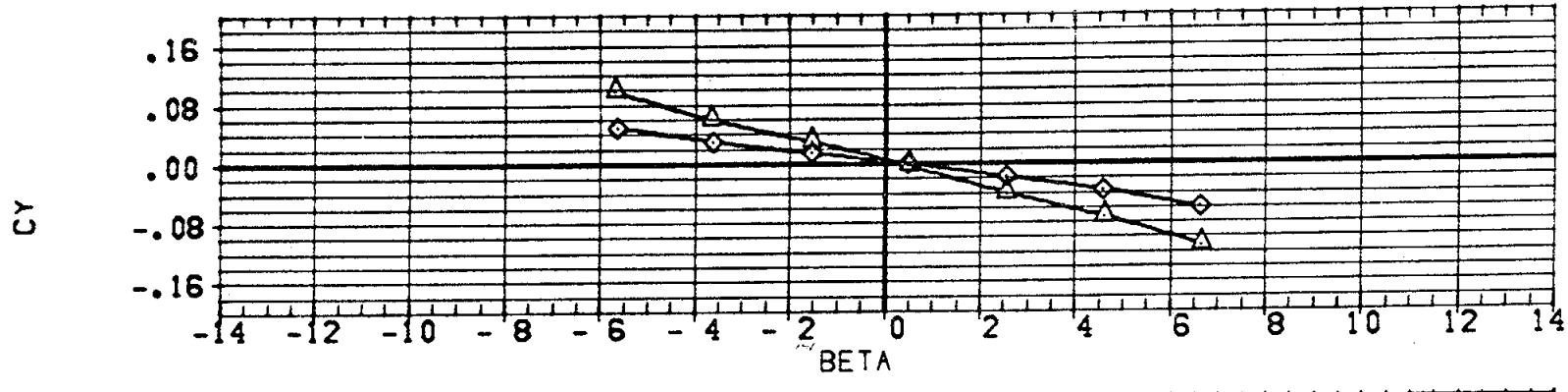


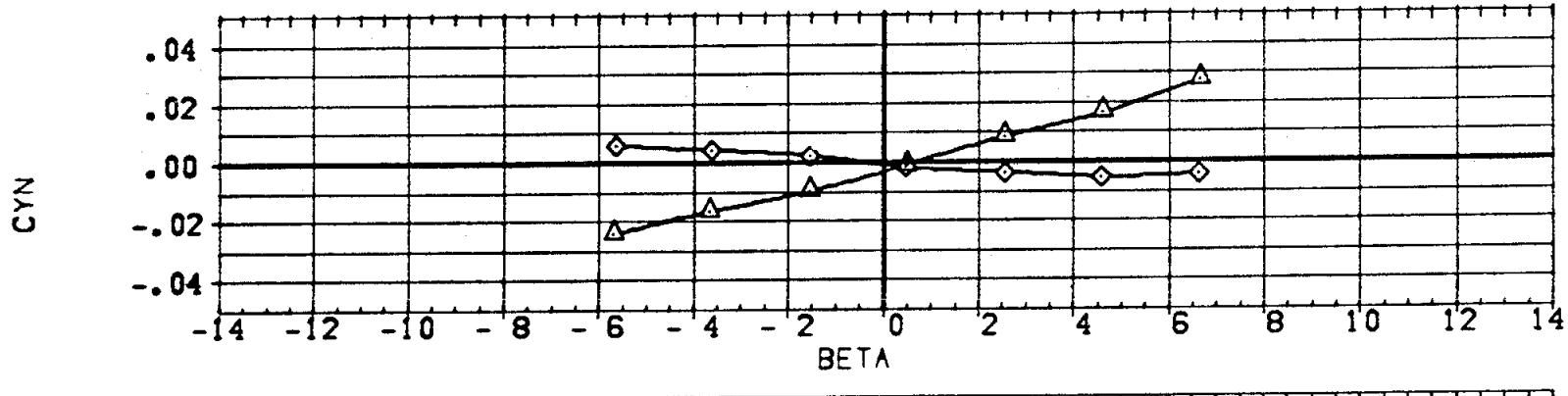
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

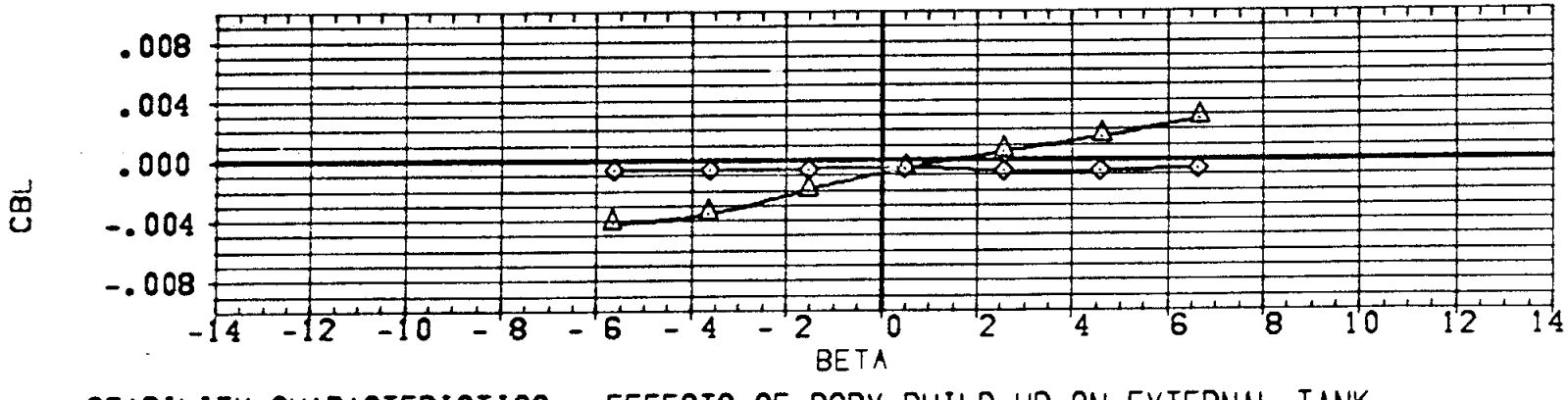
(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72107)		DATA NOT AVAILABLE	0.000	0.120	10.000	
(A72114)		MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	0.000	0.120	10.000	0.000
(A72121)		MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	0.000	0.120	10.000	0.000
(A72601)		DATA NOT AVAILABLE				0.000
(A72602)		DATA NOT AVAILABLE				

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

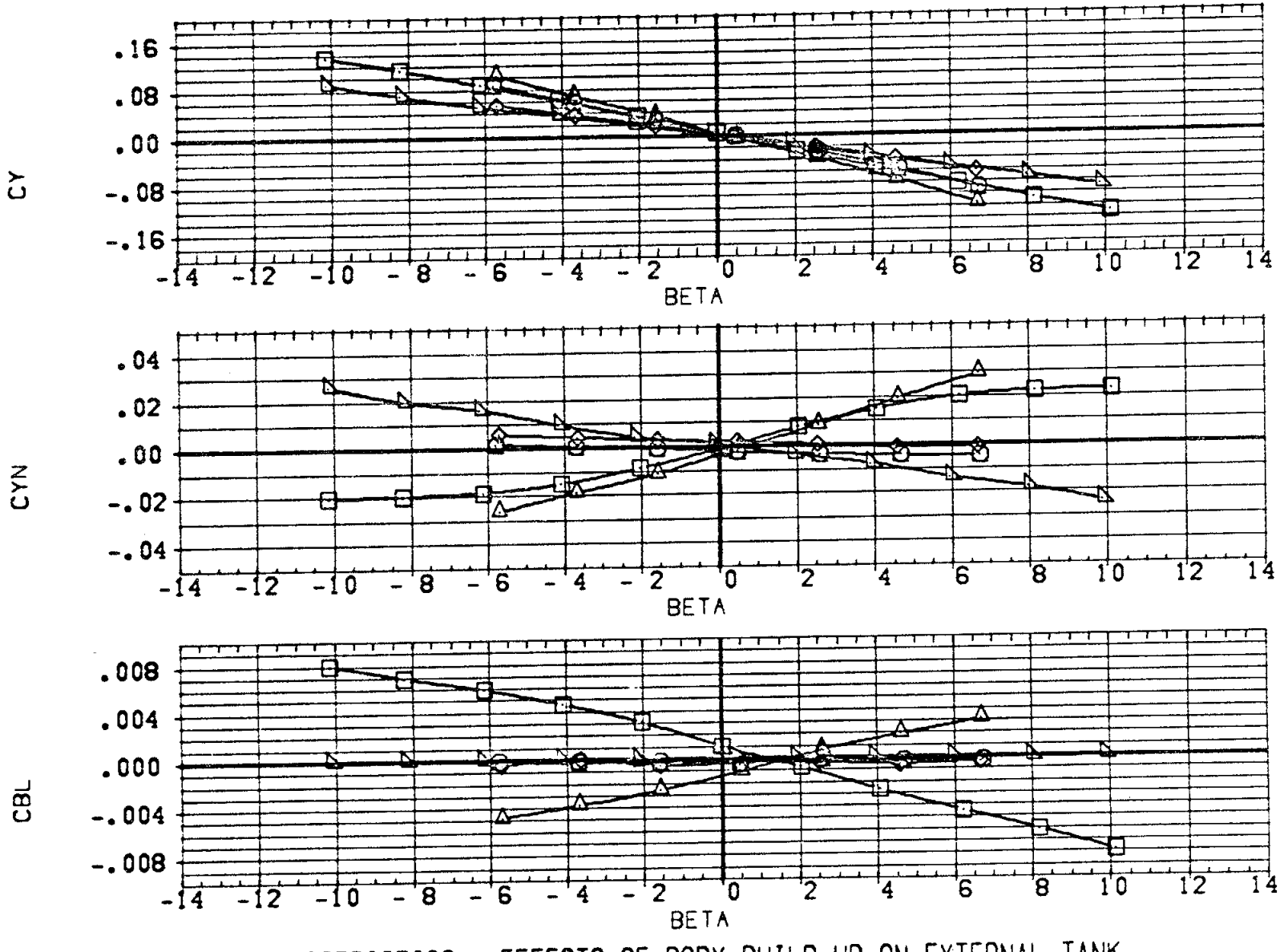
(B)MACH = 0.80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	○	MSFC 545 (1A1) MOD ATP LV-(T3)/(O1)
(A72114)	△	MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1)
(A72121)	◇	MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (1A1) NAR ATP BL LV-(T3)(S1)
(A72602)	▱	MSFC 545 (1A1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
			0.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT

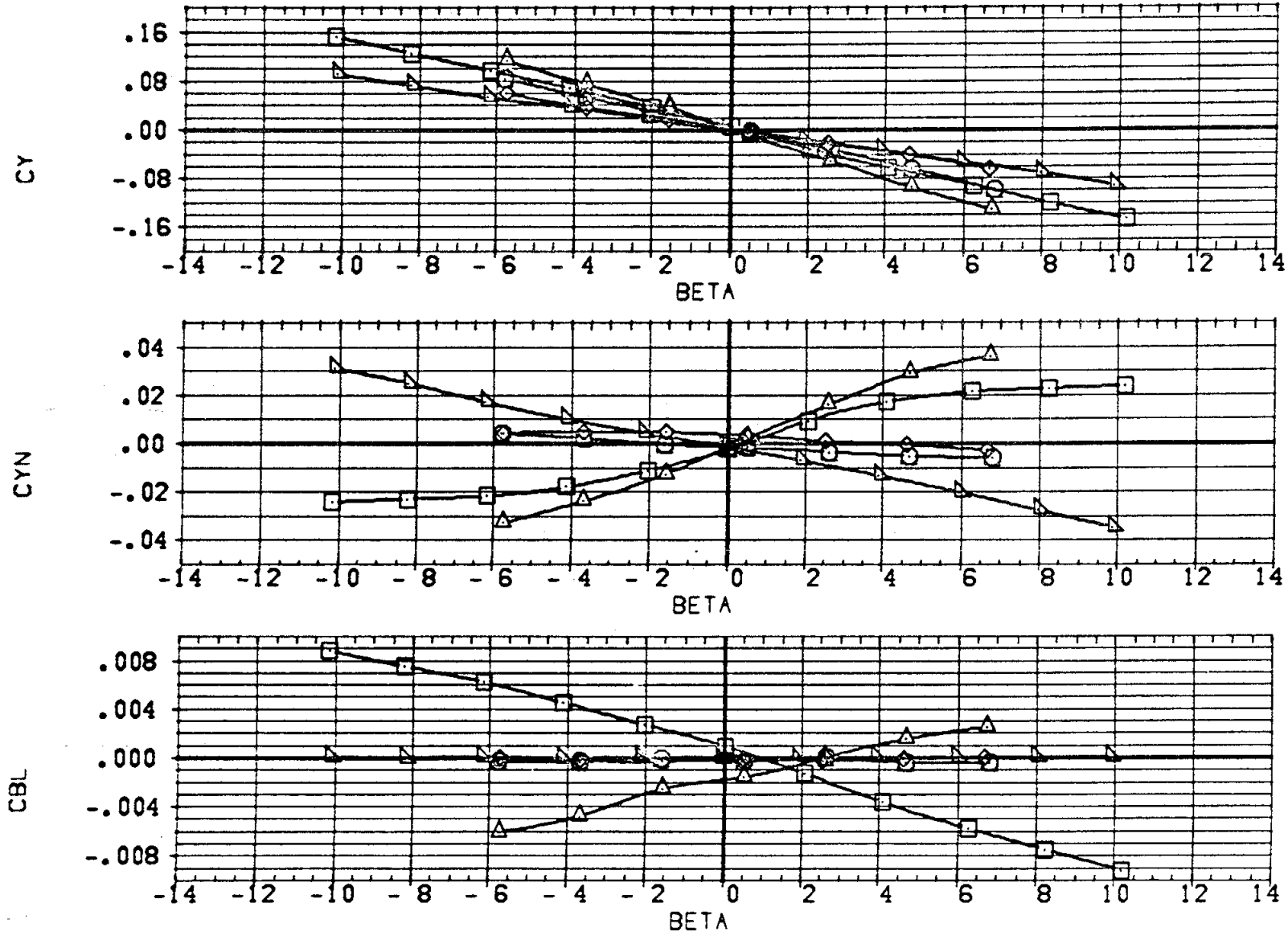


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(C)MACH = 0.90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72107)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)	0.000	0.120	10.000	
(A72114)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)	0.000	0.120	10.000	0.000
(A72121)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)	0.000	0.120	10.000	0.000
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				0.000
(A72602)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)				

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

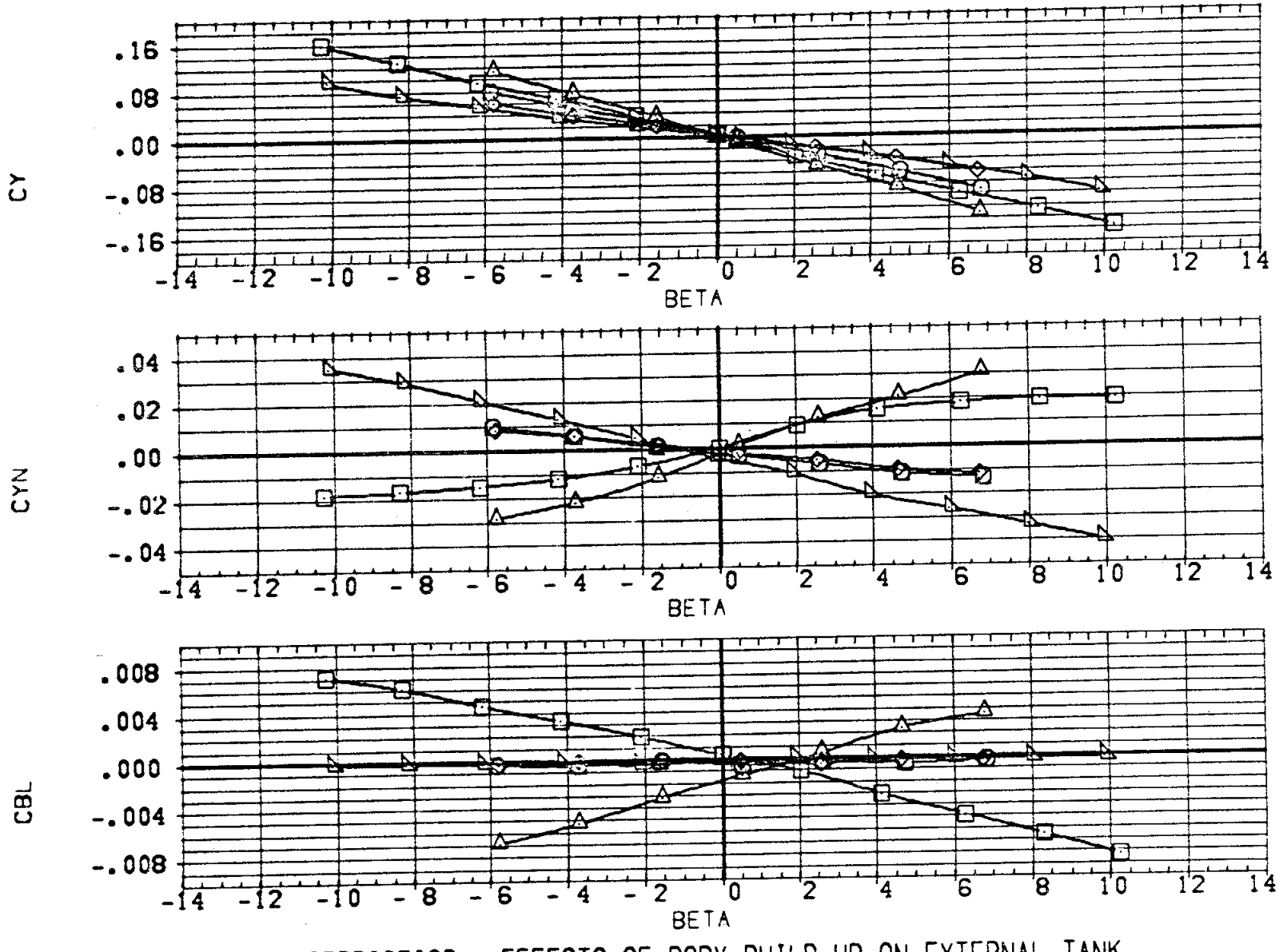
(D)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72114)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72121)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72602)	▷	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
			0.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



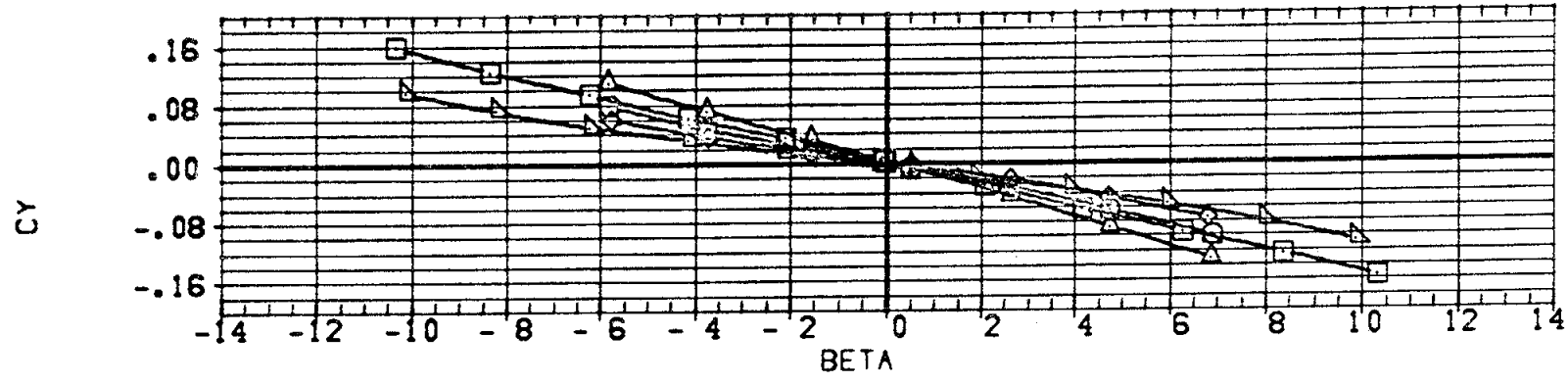
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

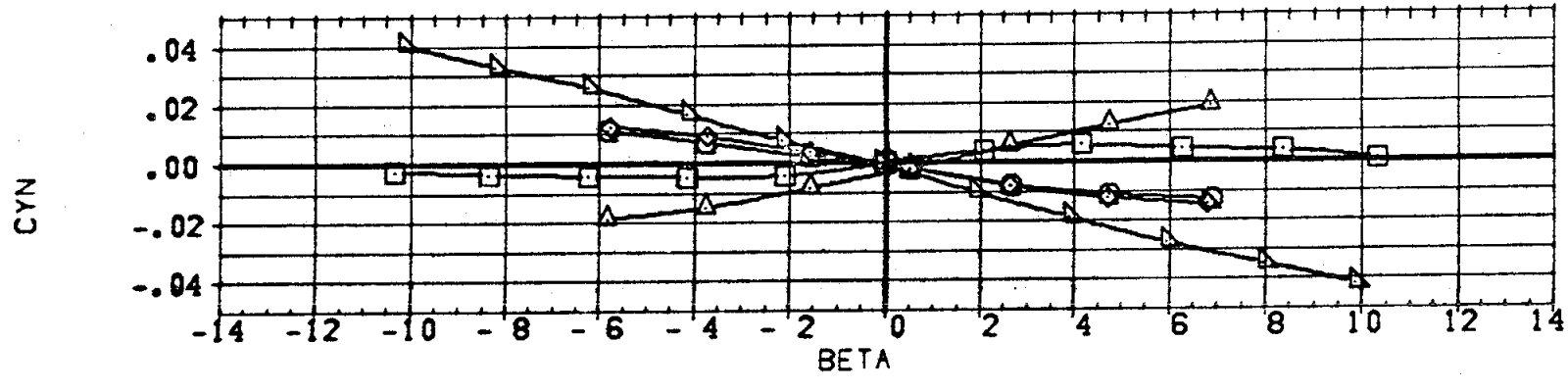
(E)MACH = 1.20

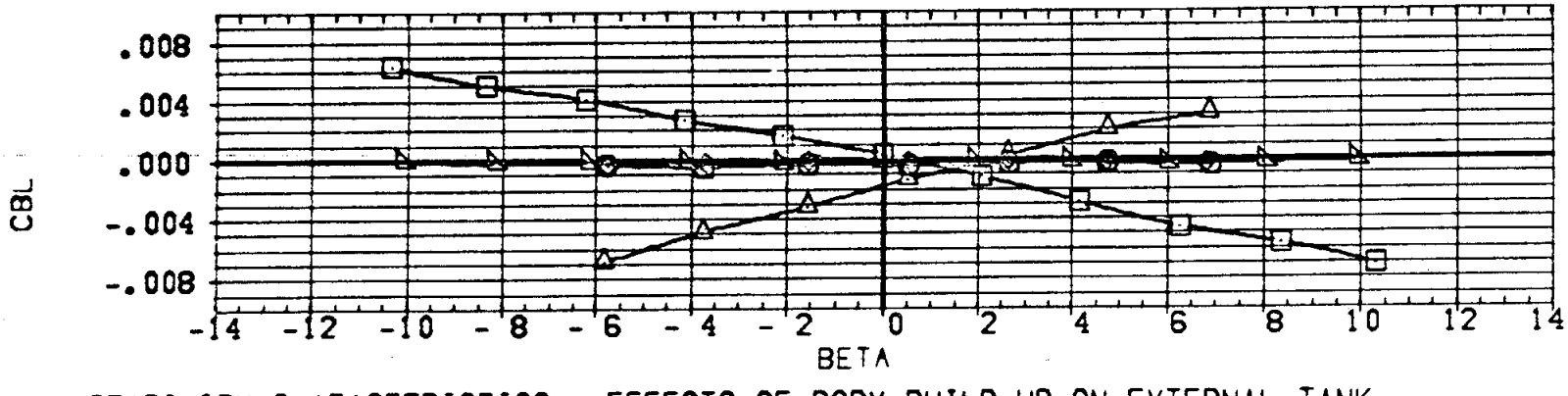
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2107)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)	0.000	0.120	10.000	
(AY2114)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	0.000	0.120	10.000	0.000
(AY2121)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	0.000	0.120	10.000	0.000
(AY2601)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)				0.000
(AY2602)	△	MSFC 545 (IA1) NAR ATP BL LV-(TS)				

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







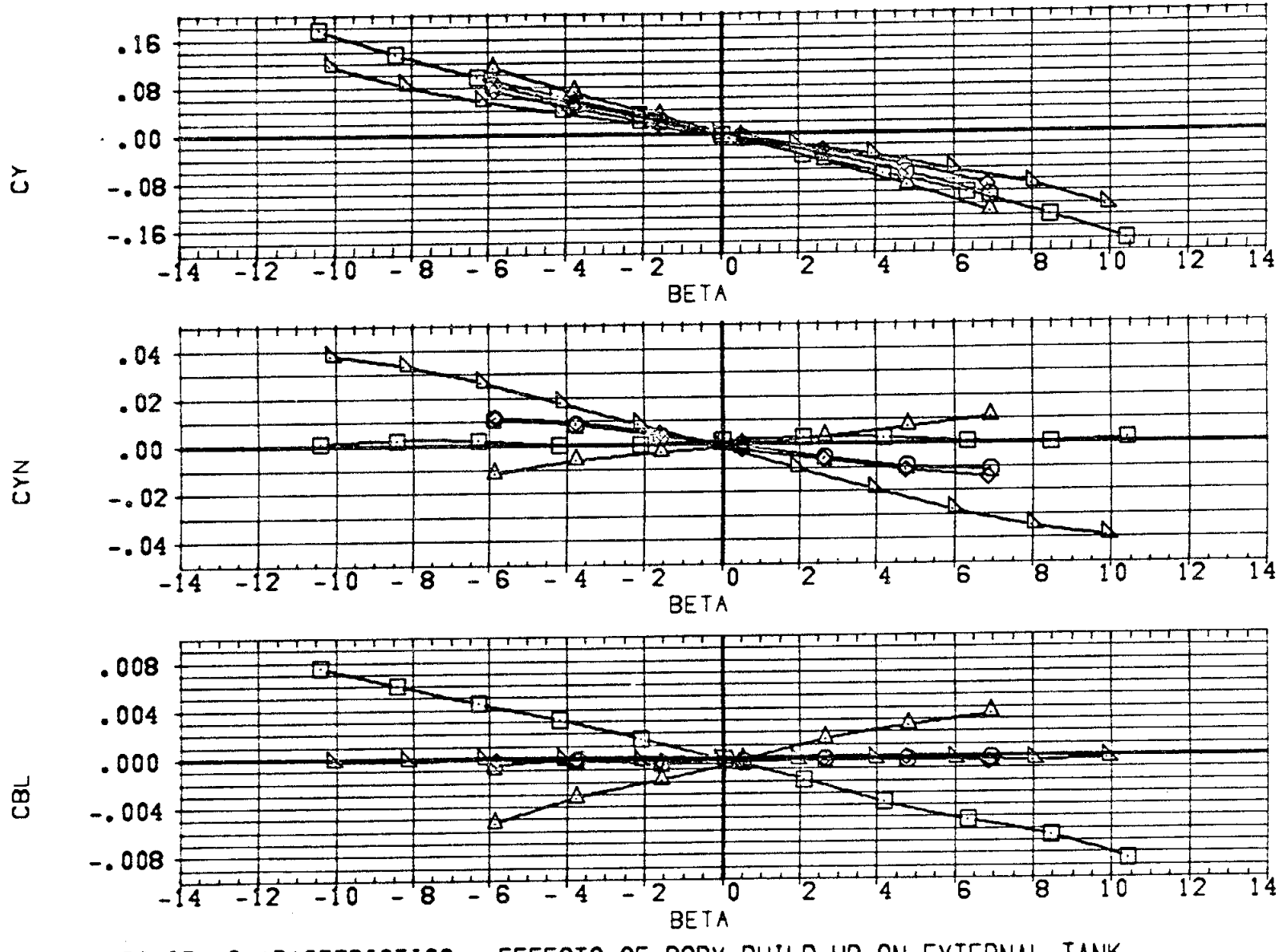
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(F)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72114)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72121)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)
(A72602)	▽	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
			0.000

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

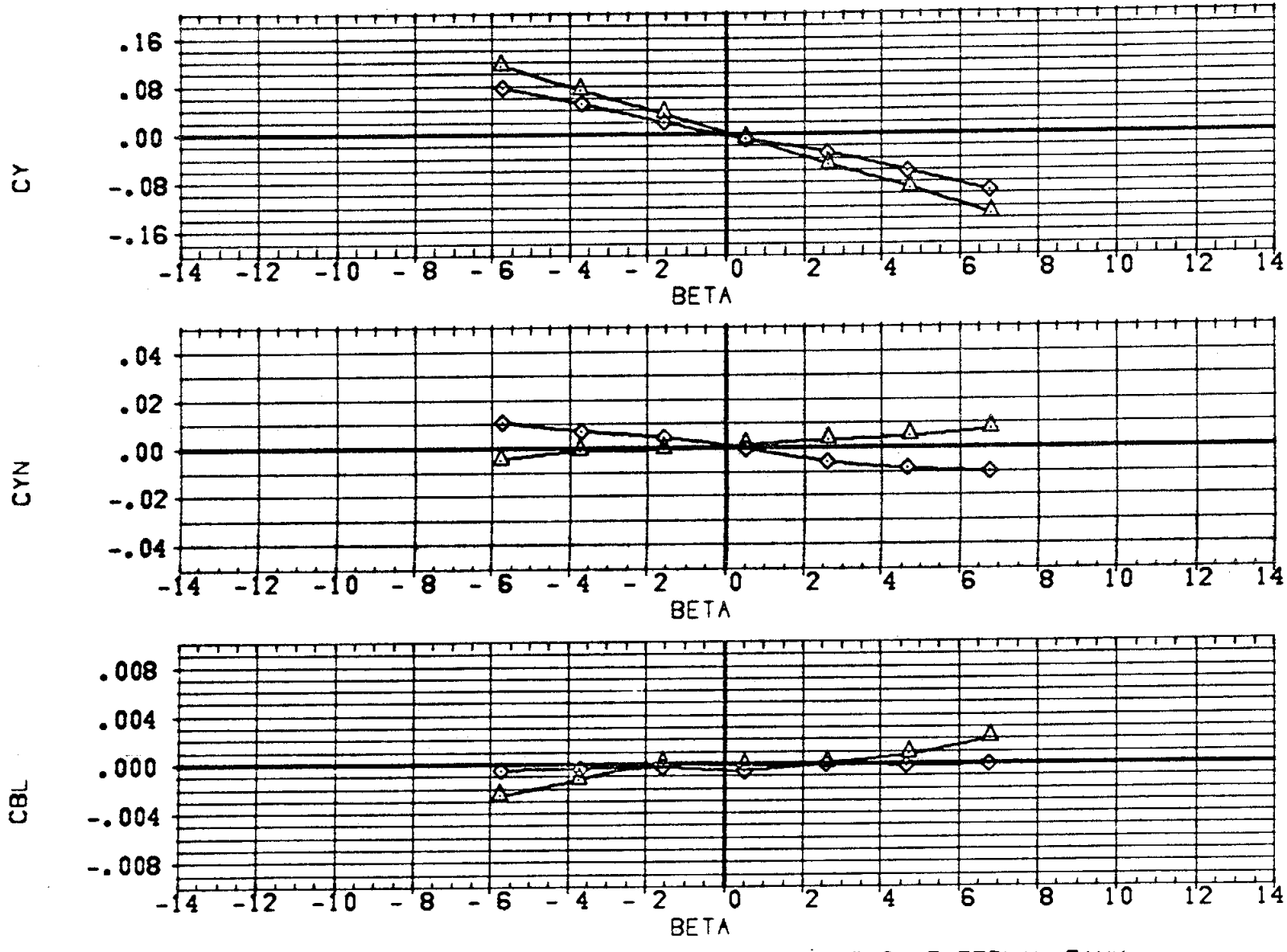
(G)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	○	DATA NOT AVAILABLE
(A72114)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72121)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72801)	□	DATA NOT AVAILABLE
(A72802)	▽	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
			0.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1326.0	IN.
BREF	1326.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

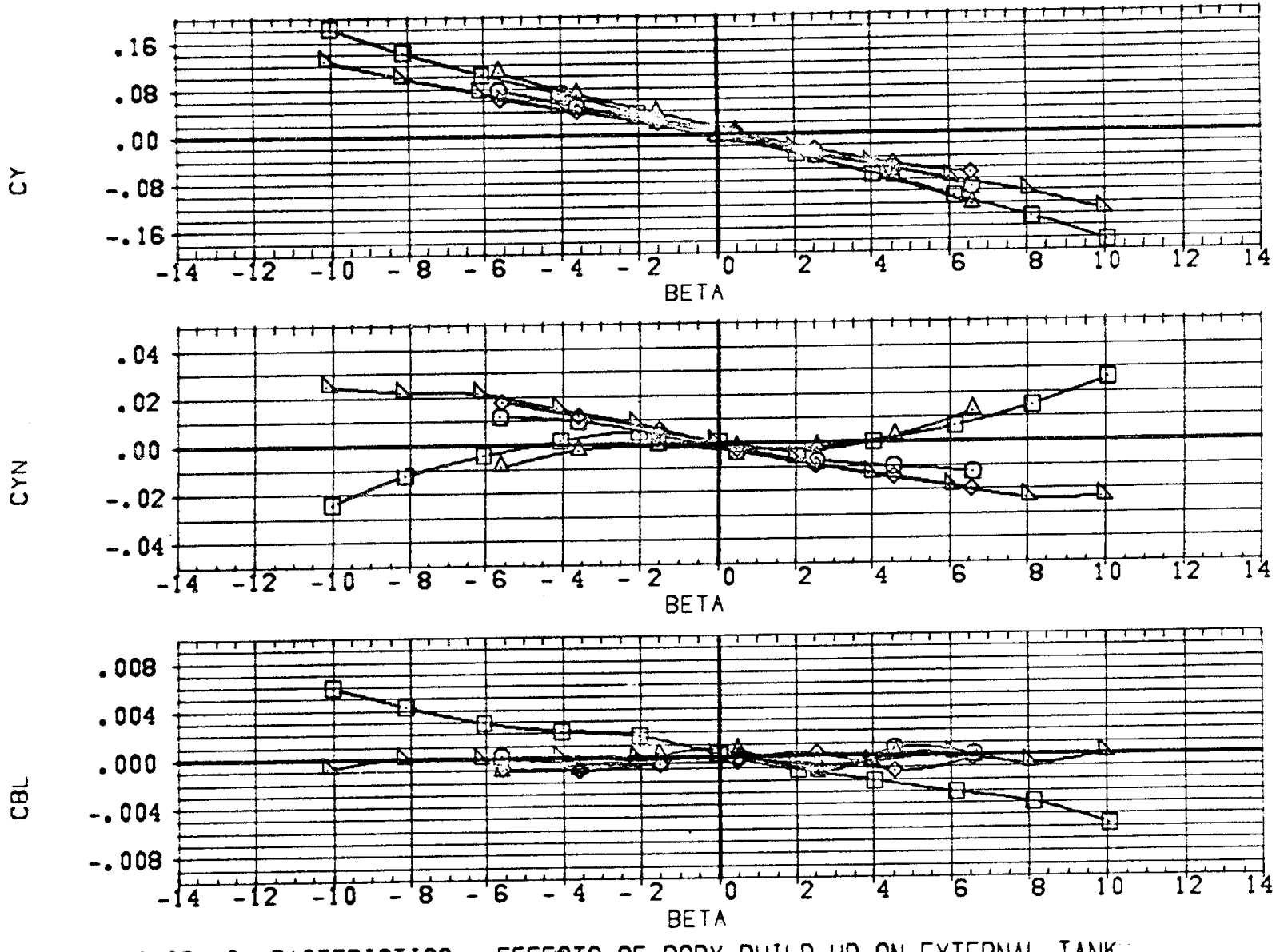
(H)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72114)	□	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72121)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72401)	△	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)
(A72602)	▽	MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	0.000
0.000	0.120	10.000	0.000
			0.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

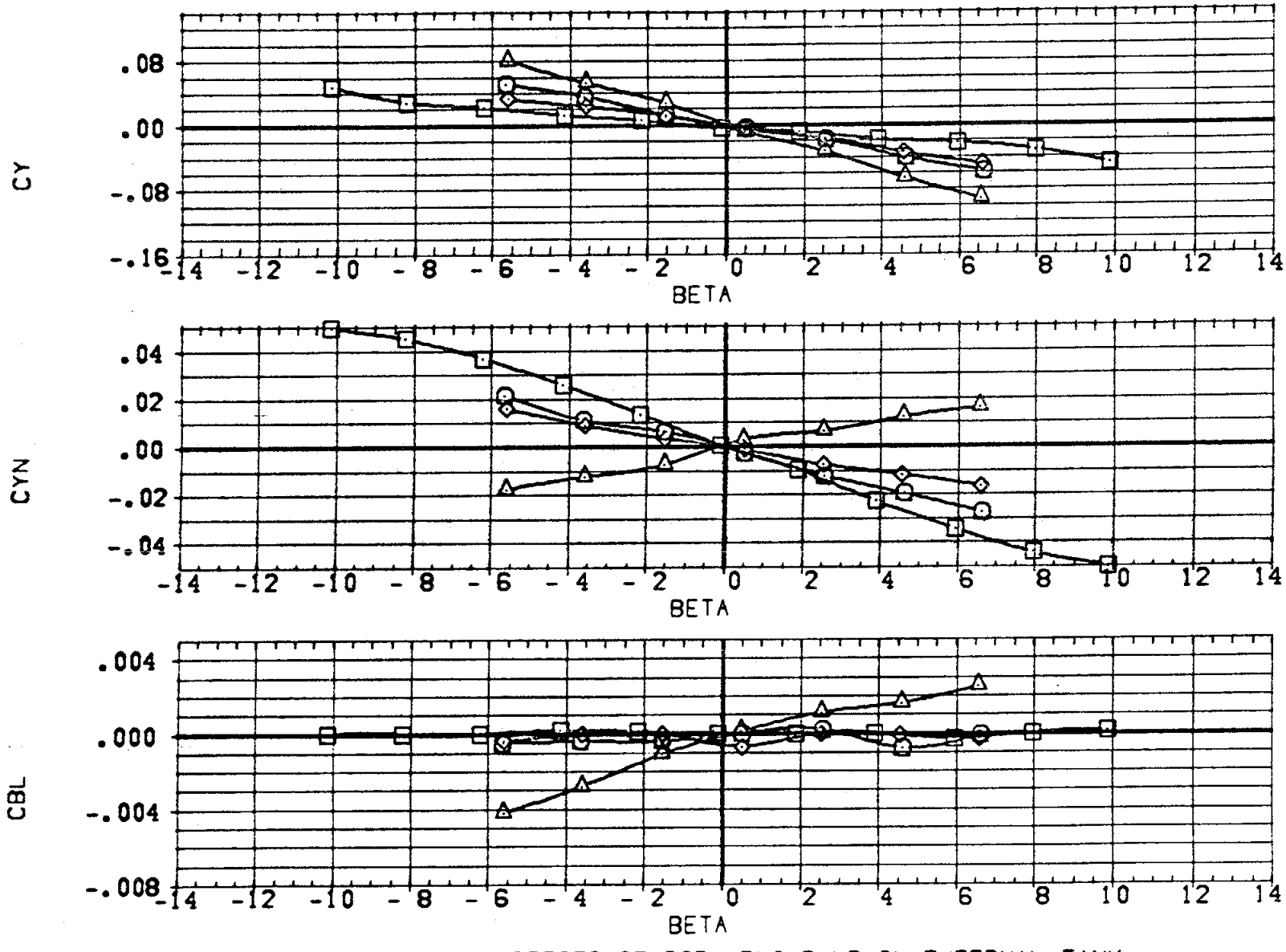
( )MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72128)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72135)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72602)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



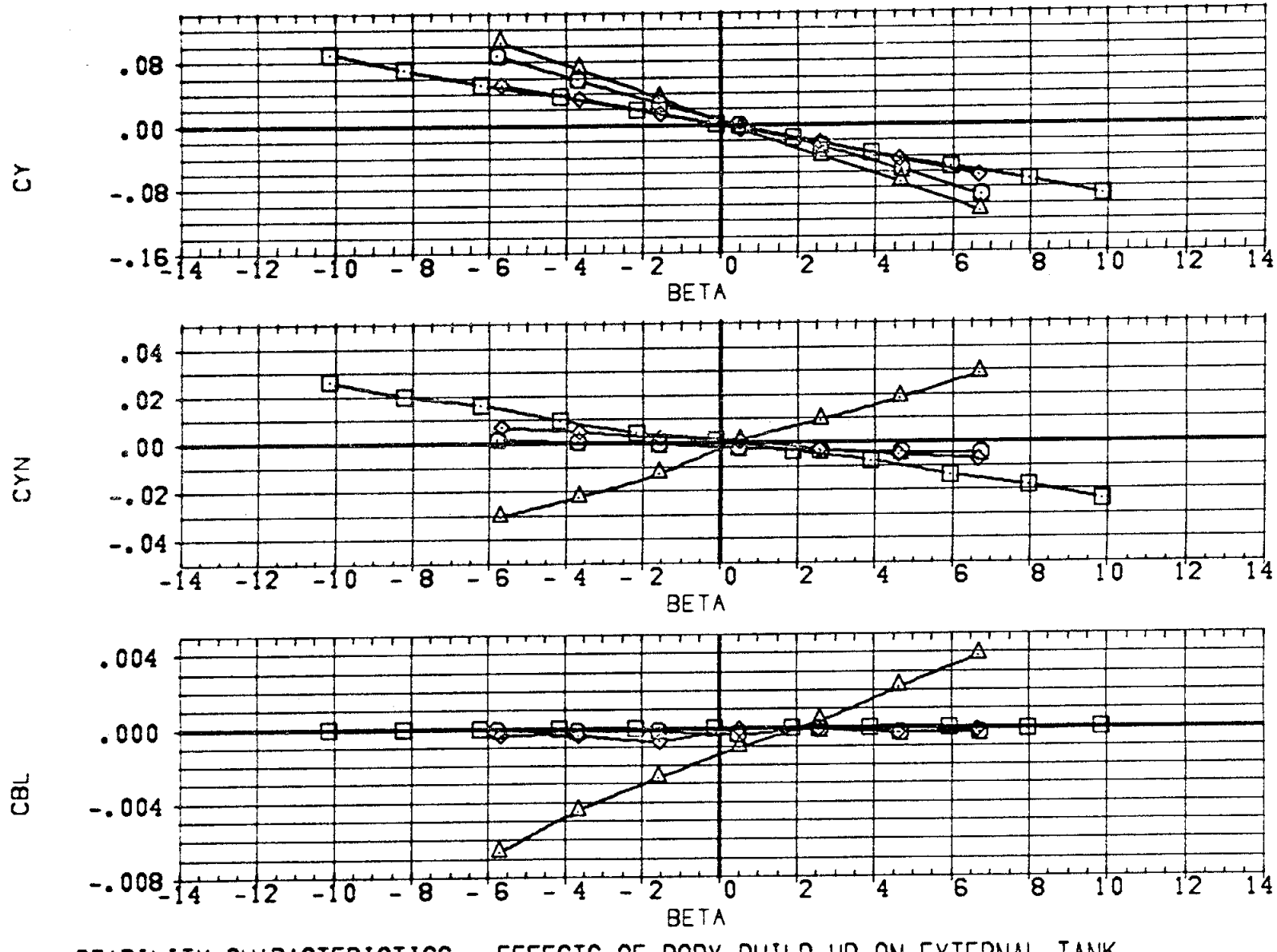
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2107)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(AP2126)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(AP2135)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AP2602)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624

REFERENCE INFORMATION		
SREF	3280.0	SQ.FT.
LREF	1326.0	IN.
BREF	1326.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



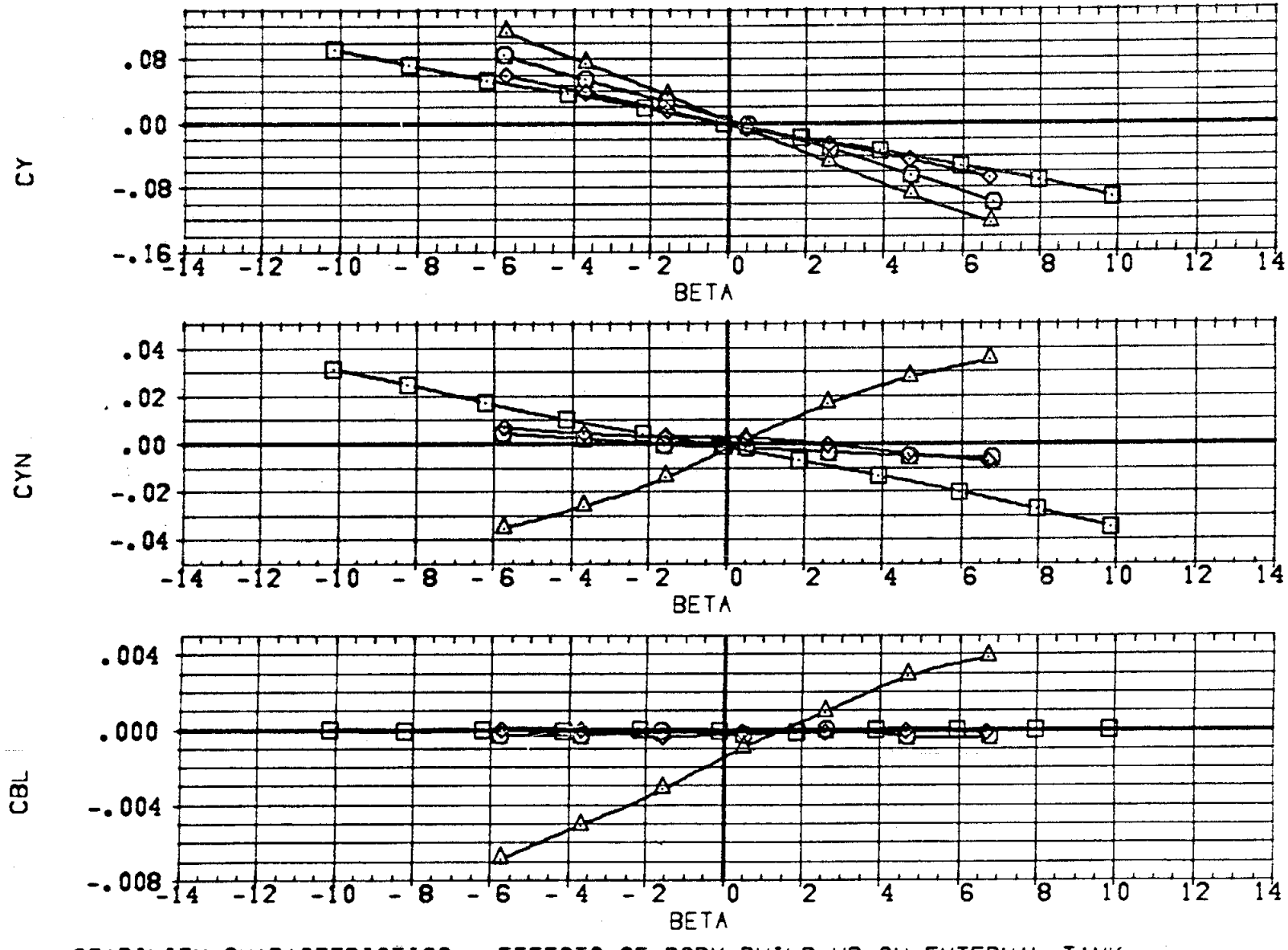
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(B)MACH = 0.90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72107)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)	0.000	0.120	10.000	
(A72128)	▽	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)	0.000	0.120	10.000	-0.624
(A72135)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)	0.000	0.120	10.000	-0.624
(A72602)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)				

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

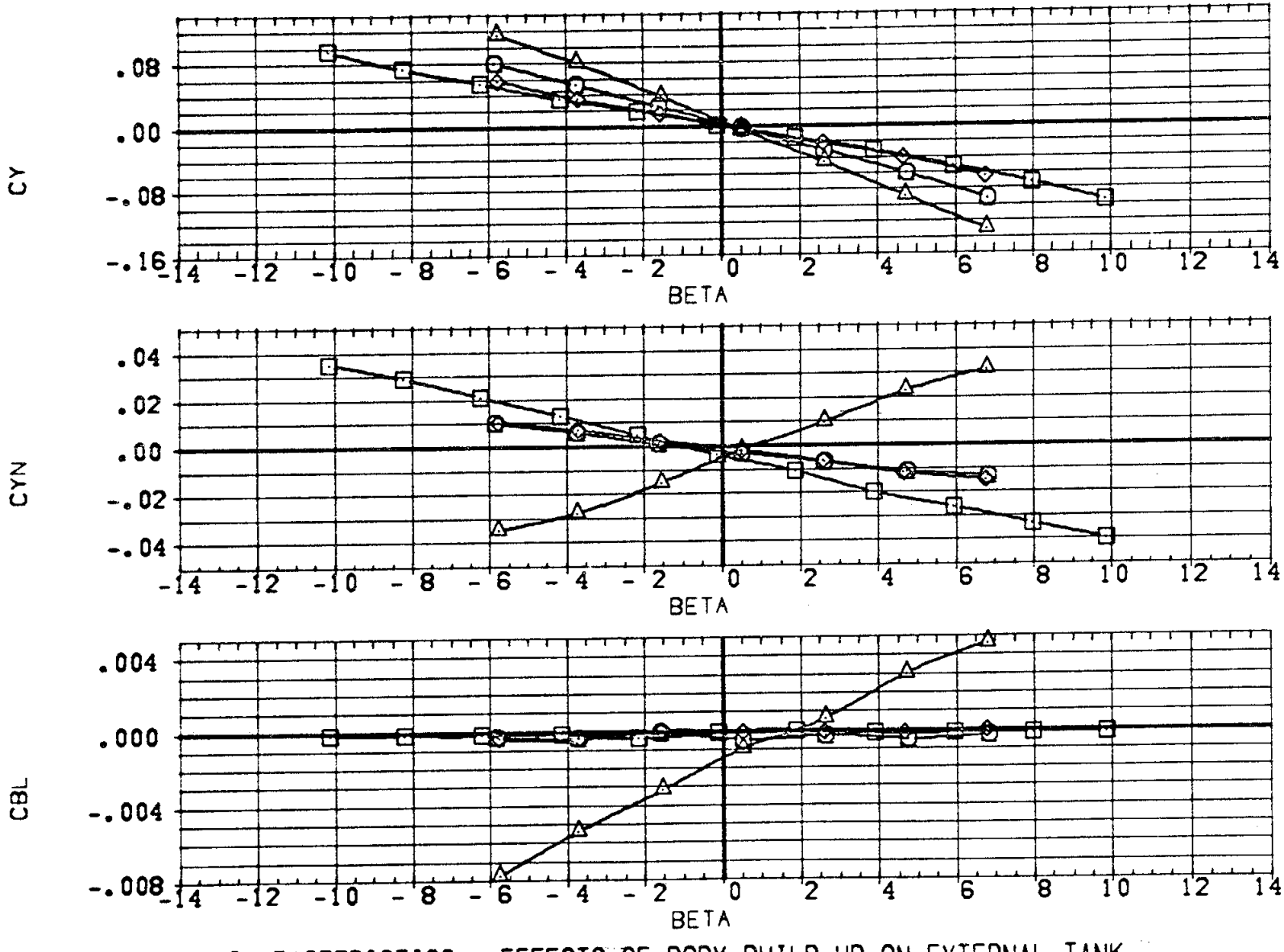
(C)MACH = 1.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(A72126)	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(A72135)	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72602)	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



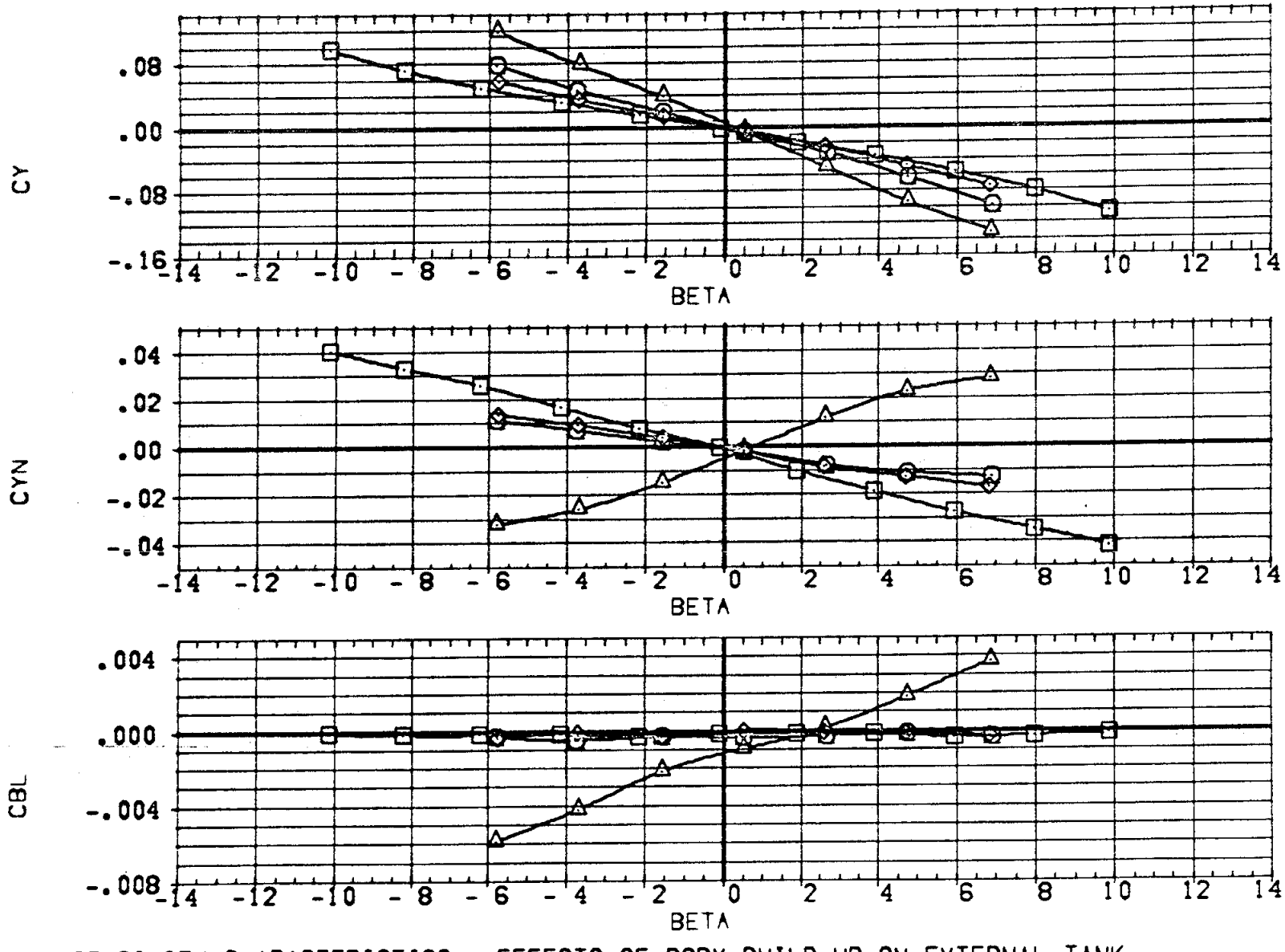
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	○	MSFC 545 (IA1) MOD ATP LV-(TS)/(O1)
(A72126)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1)/(O1)
(A72135)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)/(S1)/(O1)
(A72602)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



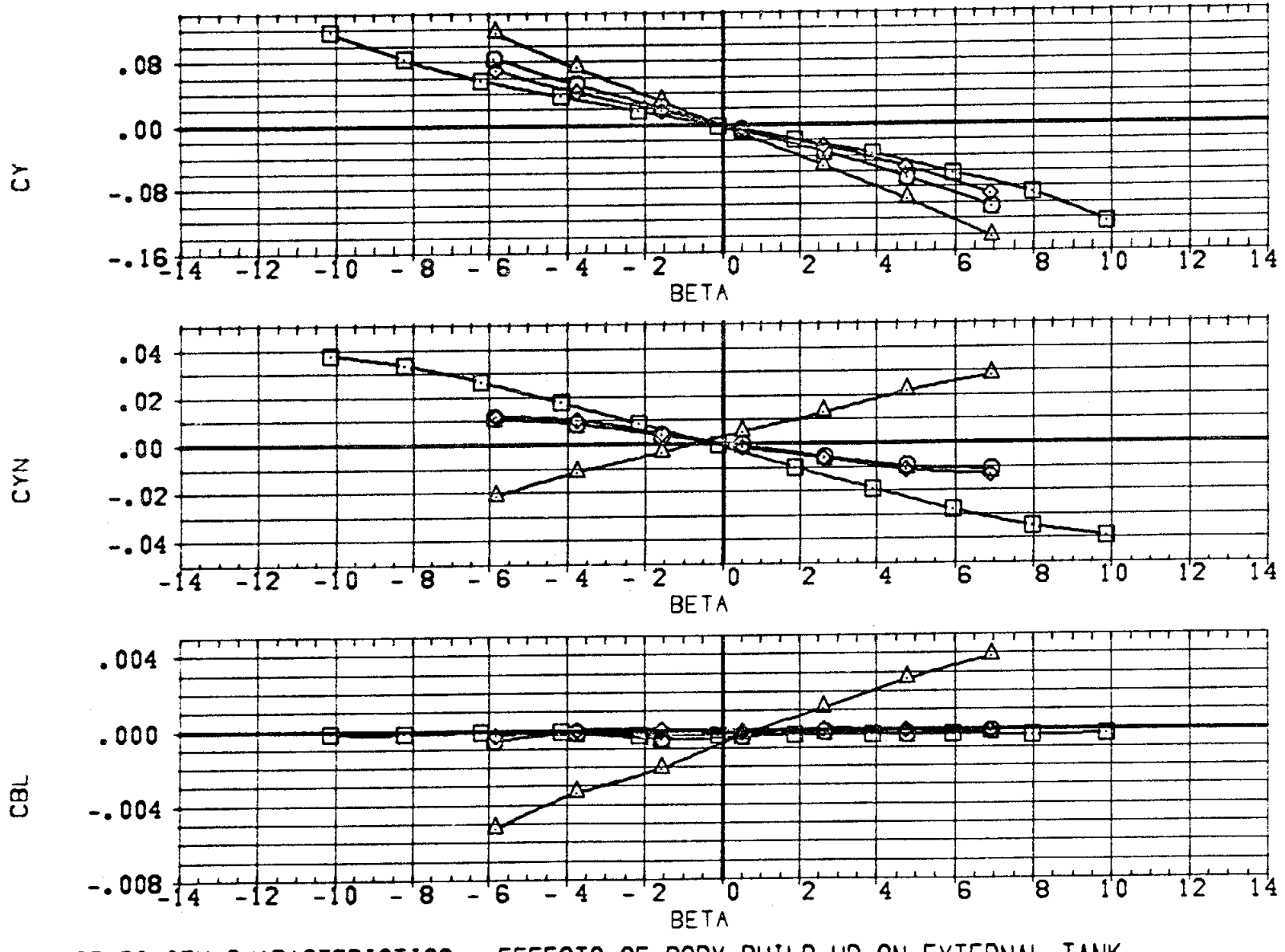
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72107)	○	MSFC 545 (IA1) MOD ATP LV-(T5)/(O1)
(A72126)	△	MSFC 545 (IA1) MOD ATP LV-(T5)(S1)/(O1)
(A72135)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(A72602)	□	MSFC 545 (IA1) NAR ATP BL LV-(T5)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



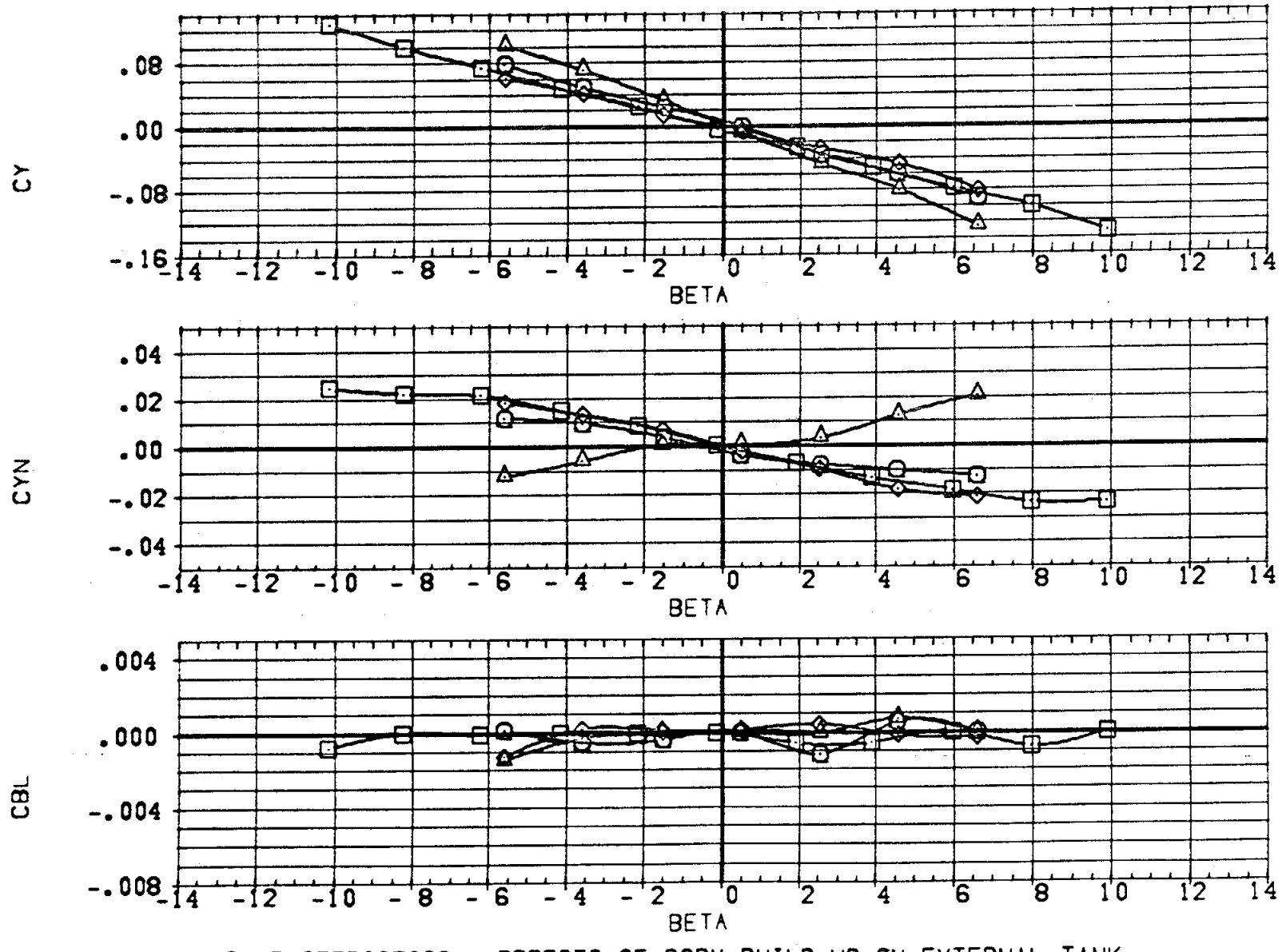
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AT2107)	○	MSFC 545 (IA1) MOD ATP LV-(T3)/(O1)
(AT2128)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1)
(AT2135)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1)
(AT2602)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	
0.000	0.120	10.000	-0.624
0.000	0.120	10.000	-0.624

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1526.0	IN.
BREF	1526.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



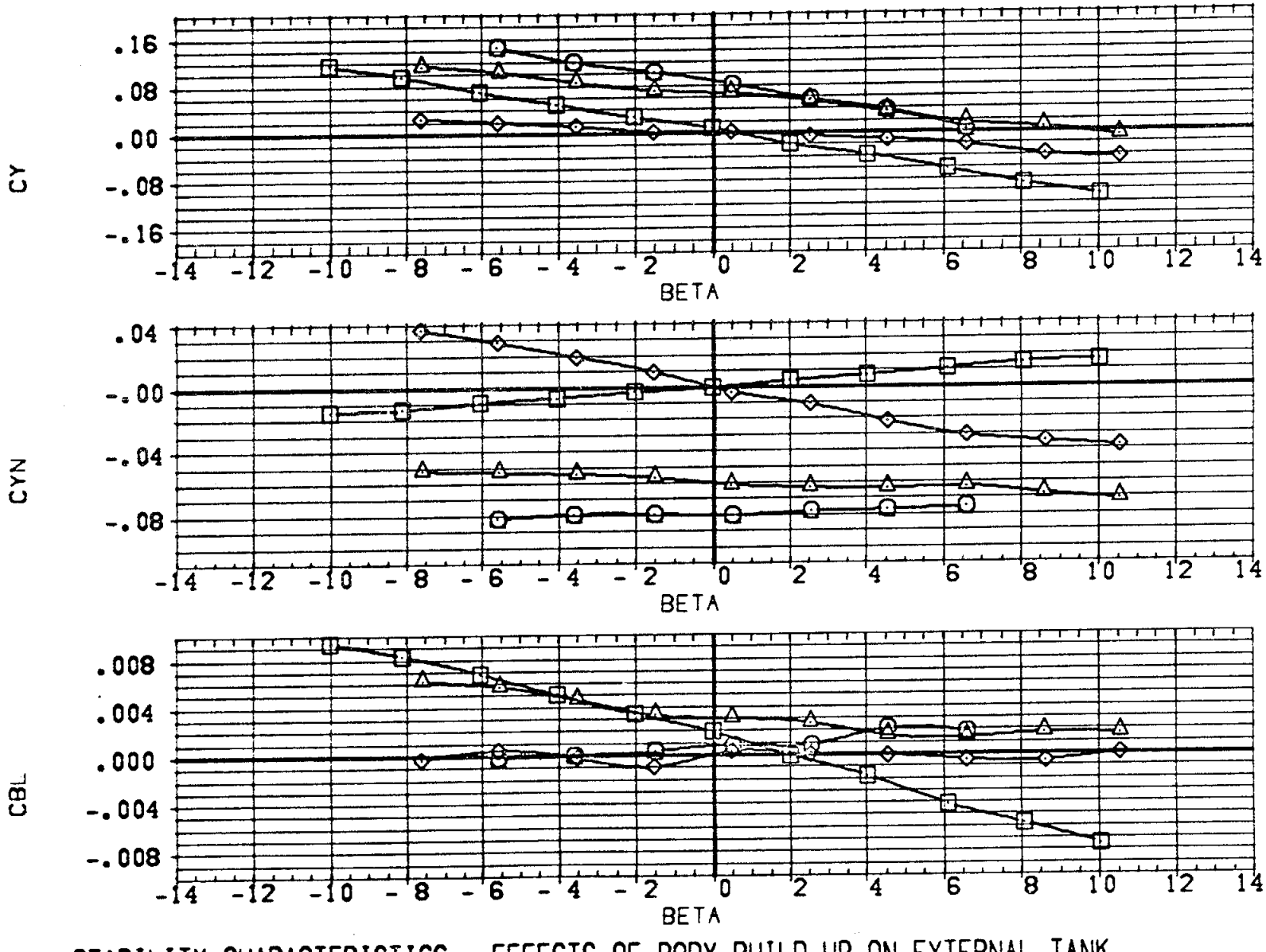
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72142)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)
(A72144)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)
(A72145)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)
(A72801)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)

ORBINC	DELTAZ	RUDFLR	X-SRB
0.000	0.120	10.000	0.000
			0.000
			0.000
			0.000

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



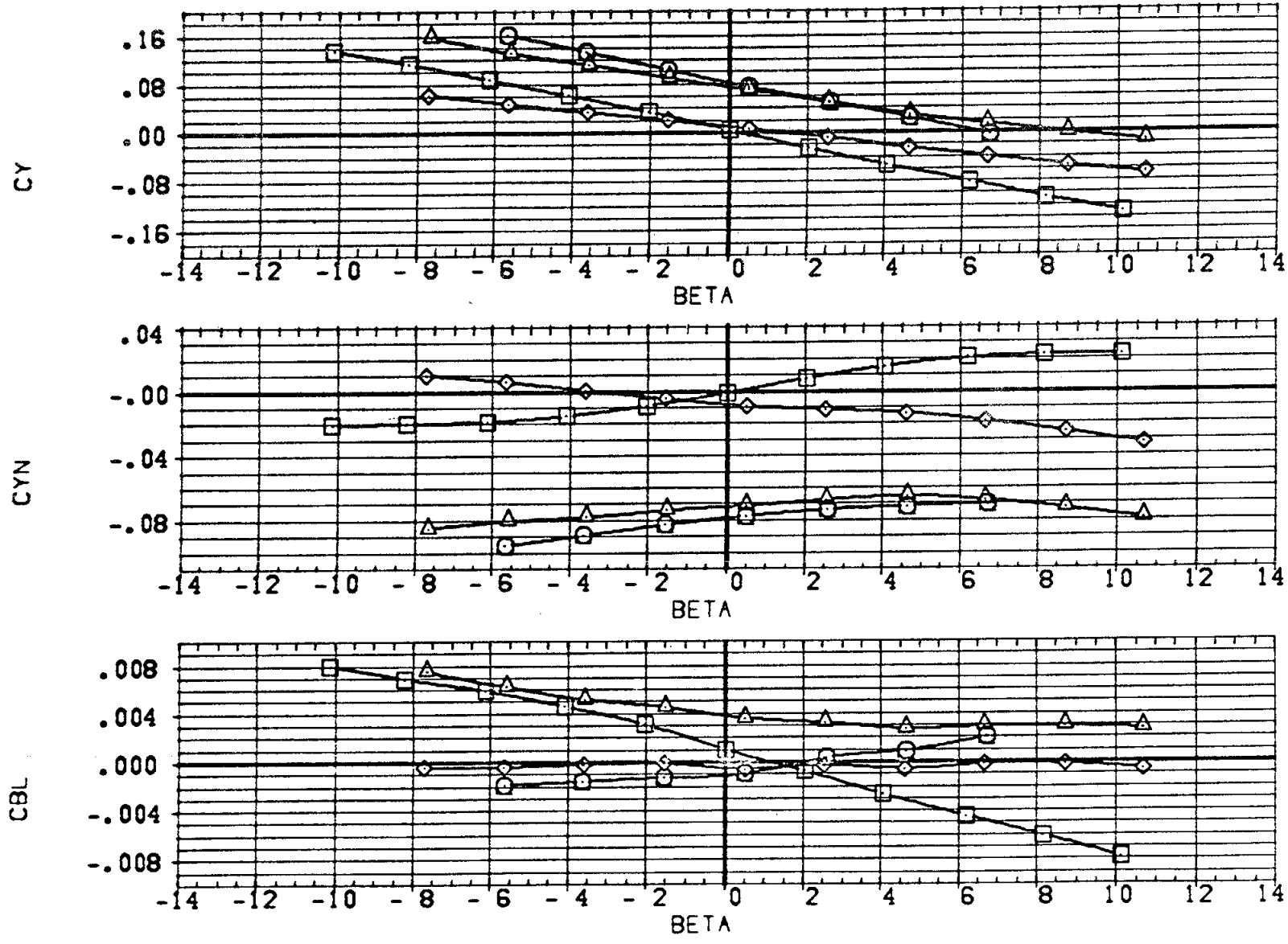
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72142)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	0.000	0.120	10.000	0.000
(A72144)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)				0.000
(A72149)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)				0.000
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				0.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT

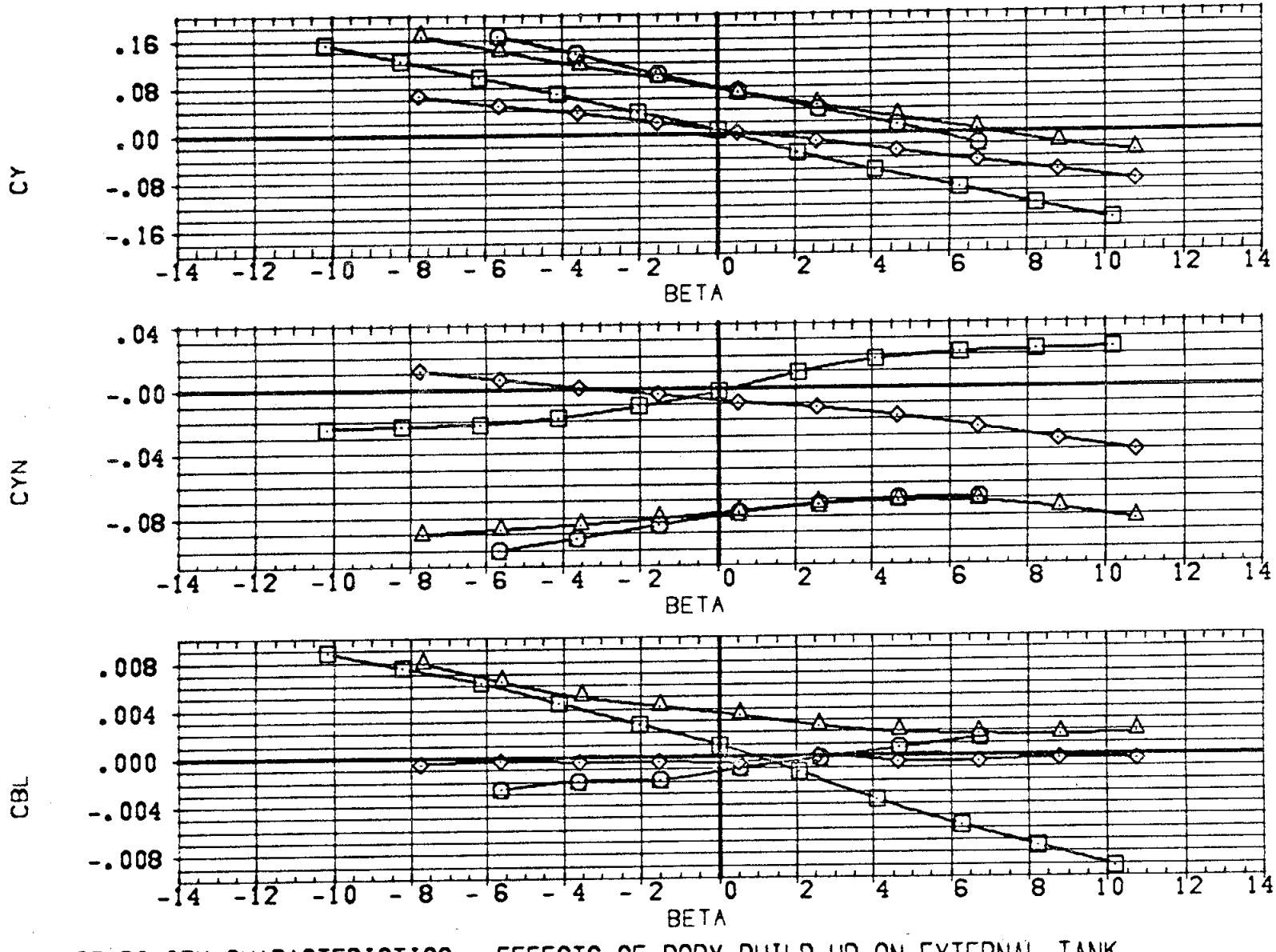


STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(B)MACH = 0.90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72142)	○	MSFC 545 (IA1) MOD ATP LV-(TS)(S1/2)/(S1/2)/(S1/2)/(O1)	0.000	0.120	10.000	0.000
(A72144)	△	MSFC 545 (IA1) MOD ATP LV-(TS)(S1/2)/(S1/2)/(S1/2)				0.000
(A72145)	◇	MSFC 545 (IA1) MOD ATP LV-(TS)(S1/2)				0.000
(A72801)	□	MSFC 545 (IA1) NAR ATP BL LV-(TS)(S1)				0.000

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



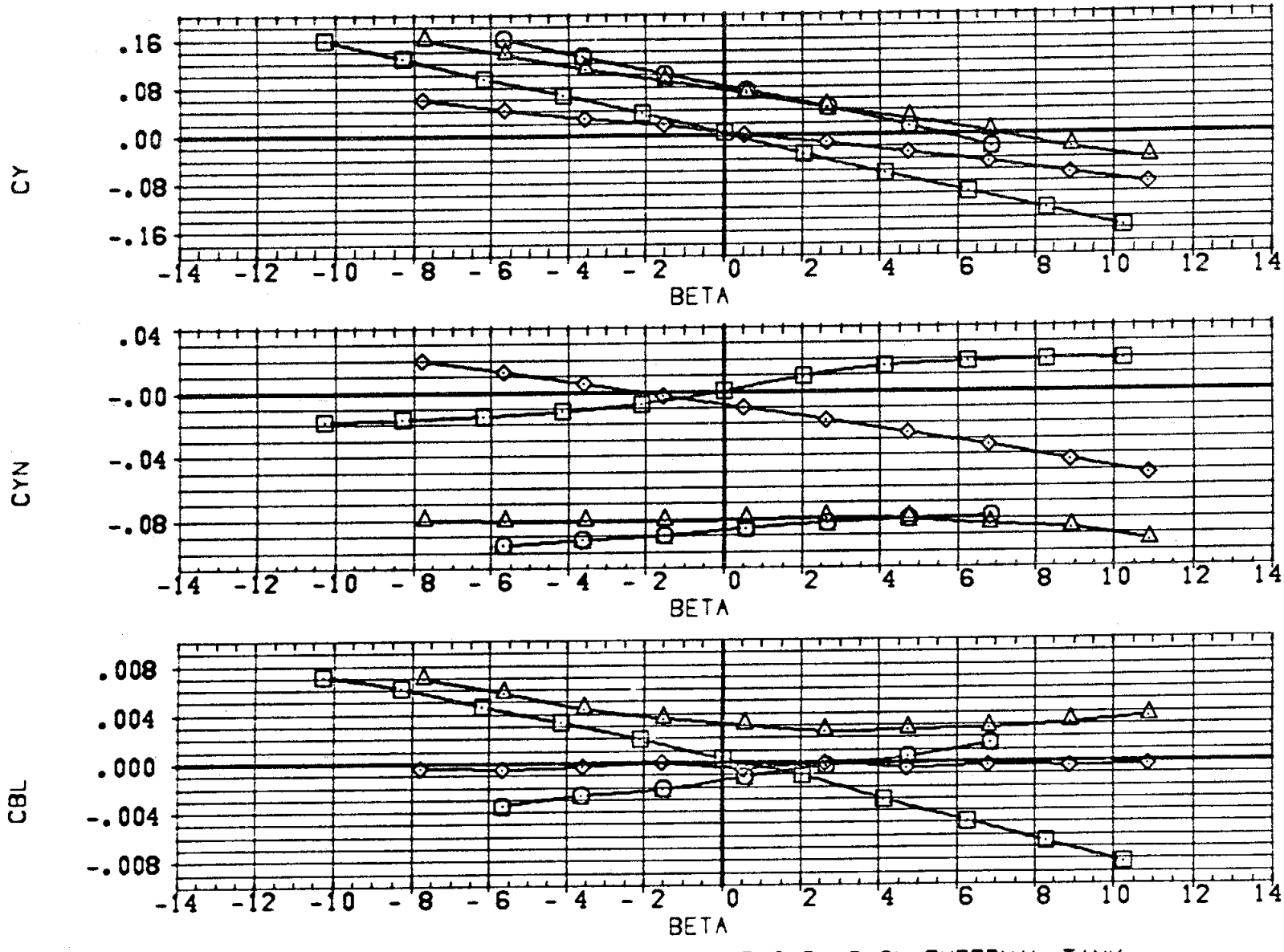
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(AY2142)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	0.000	0.120	10.000	0.000
(AY2144)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)				0.000
(AY2145)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)				0.000
(AY2601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				0.000

REFERENCE INFORMATION

SREF	5220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



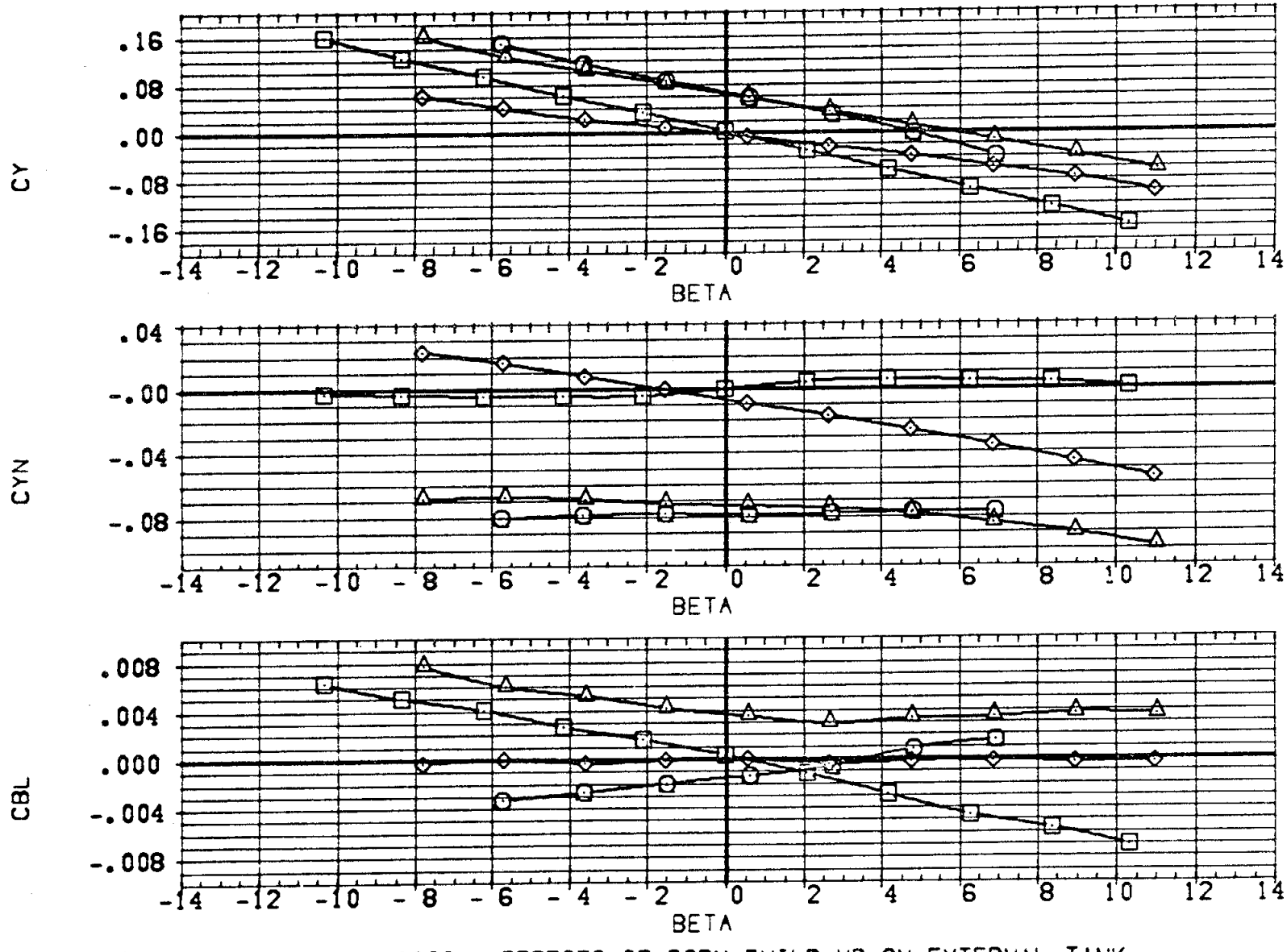
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72142)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	0.000	0.120	10.000	0.000
(A72144)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)				0.000
(A72145)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)				0.000
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				0.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



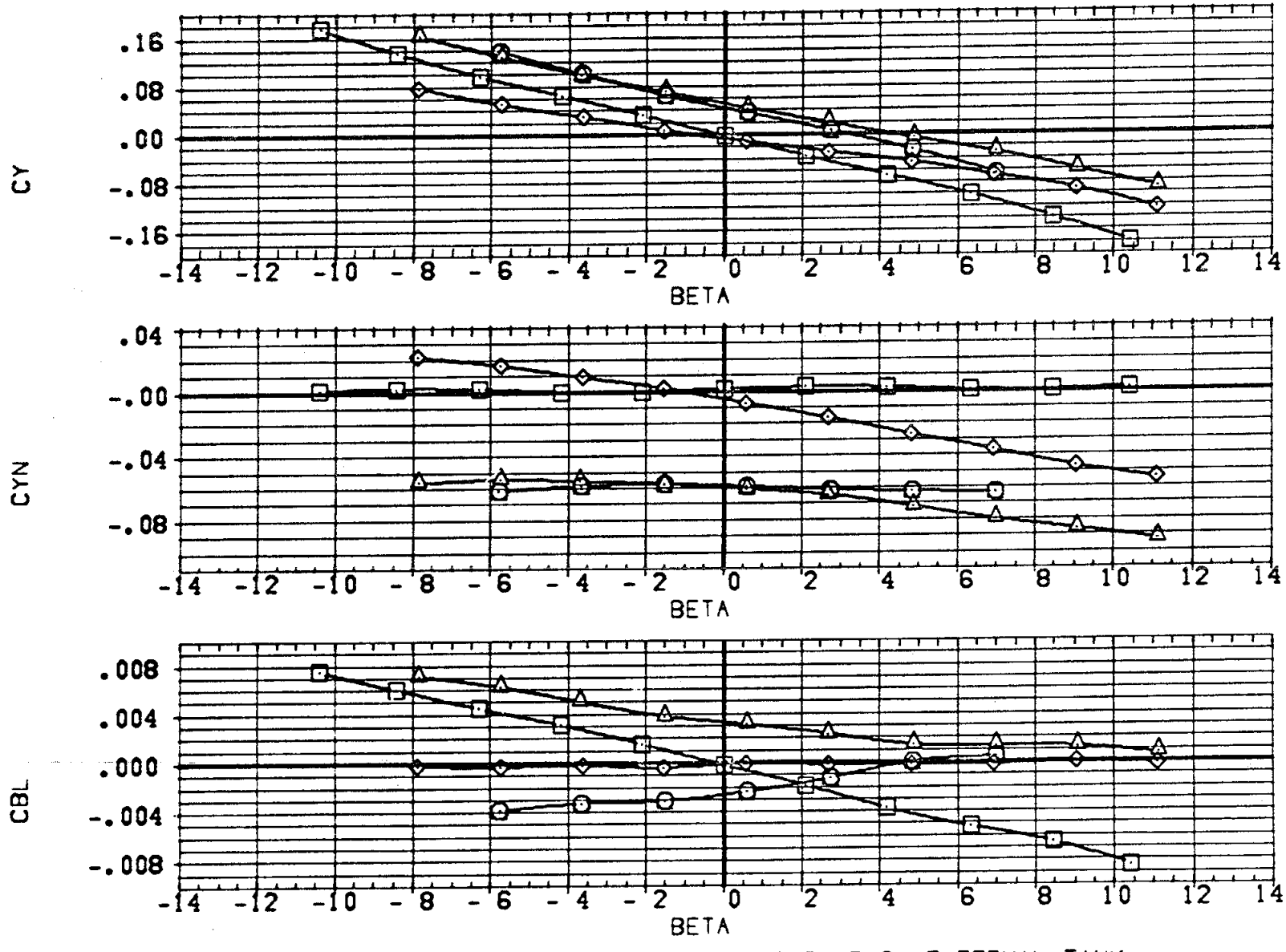
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72142)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1)	0.000	0.120	10.000	0.000
(A72144)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)				0.000
(A72145)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)				0.000
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				0.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



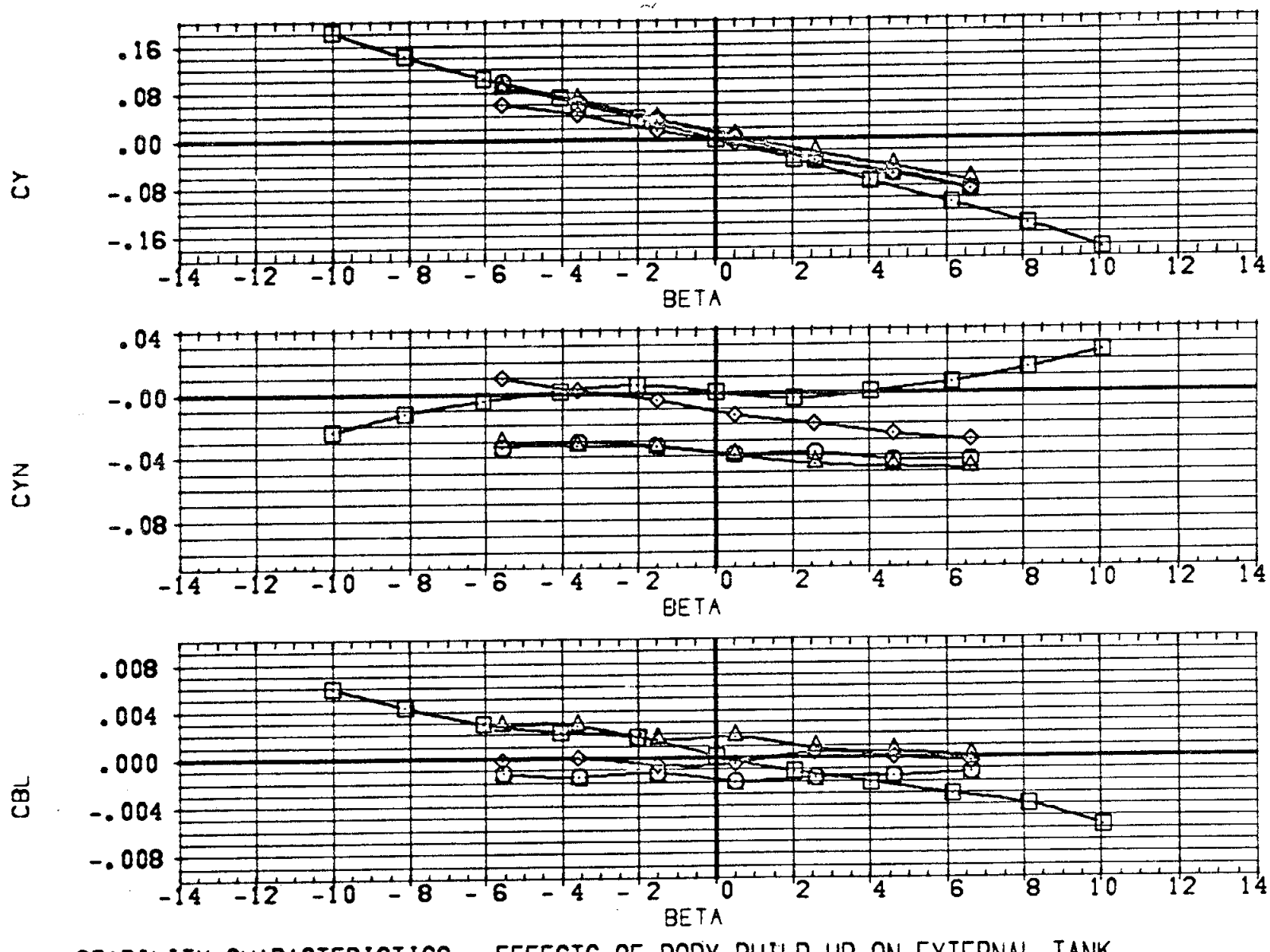
STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

(F)MACH = 1.97

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(A72142)	○	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01)	0.000	0.120	10.000	0.000
(A72144)	△	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)				0.000
(A72145)	◇	MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)				0.000
(A72601)	□	MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1)				0.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



STABILITY CHARACTERISTICS - EFFECTS OF BODY BUILD-UP ON EXTERNAL TANK

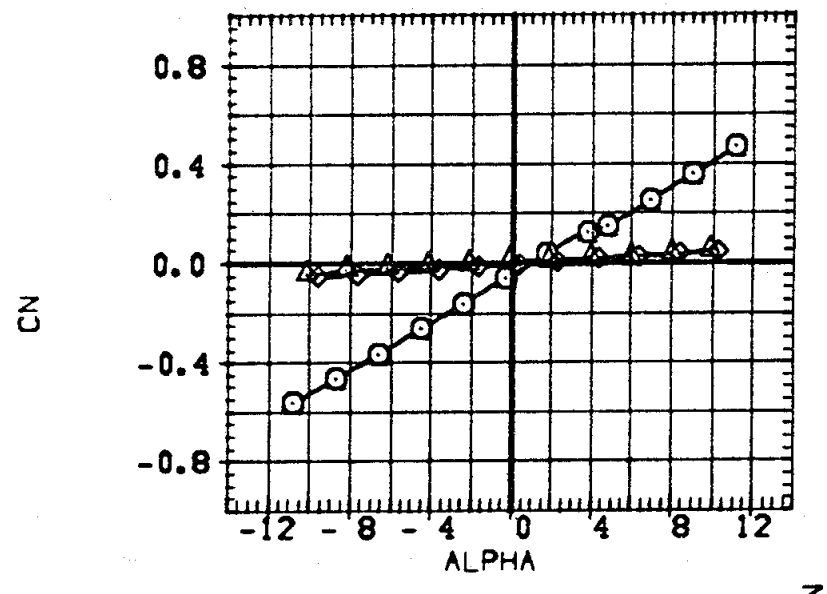
(G)MACH = 4.96

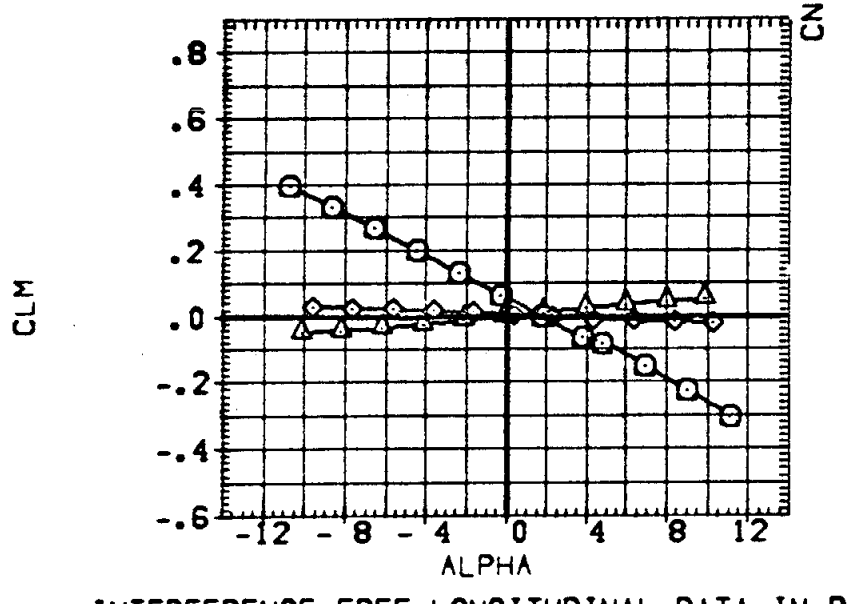
DATA SET SYMBOL CONFIGURATION DESCRIPTION

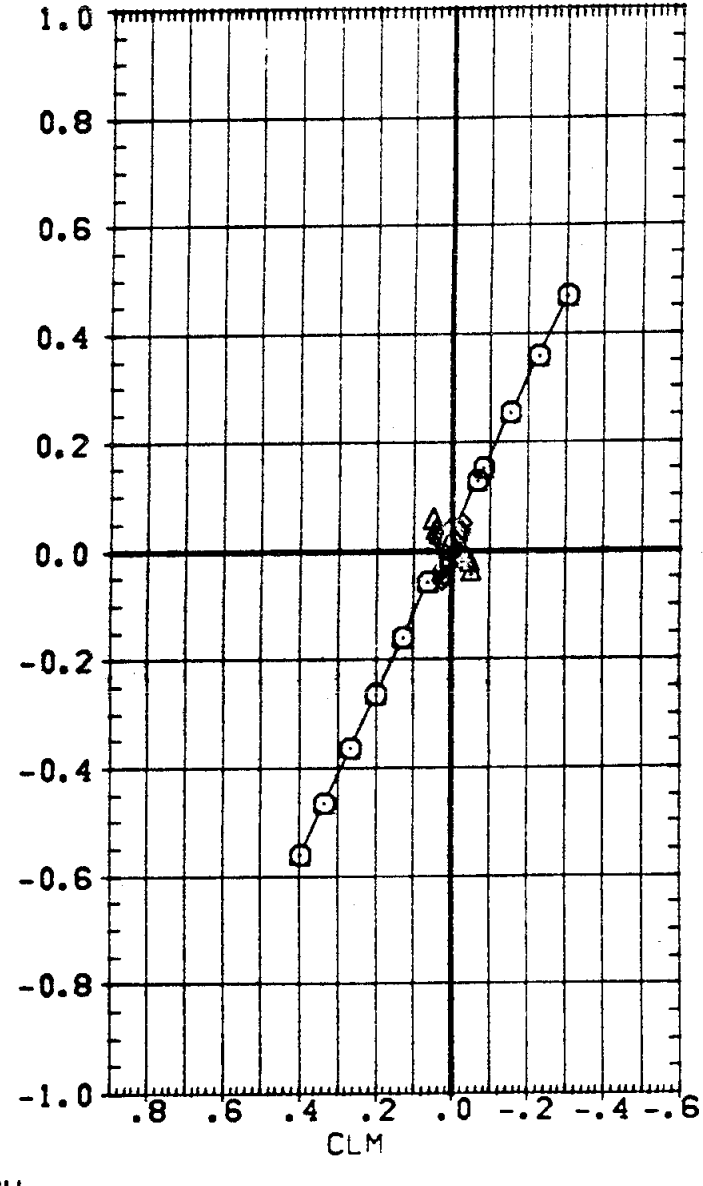
(A72501)	○	MSFC 545 (1A1) NAR ATP BL ORBITER-(O1)
(A72601)	△	MSFC 545 (1A1) NAR ATP BL LV-(T5)
(A72201)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







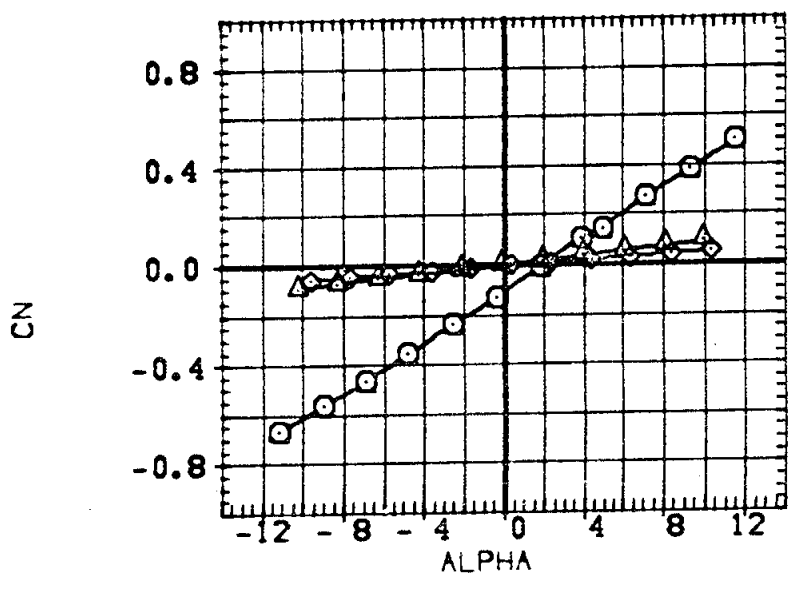
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

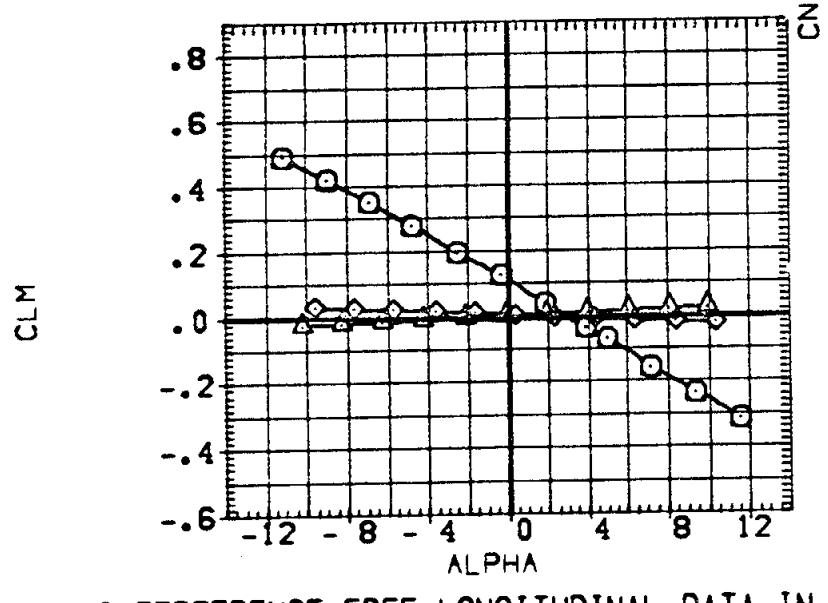
(A)MACH = 0.60

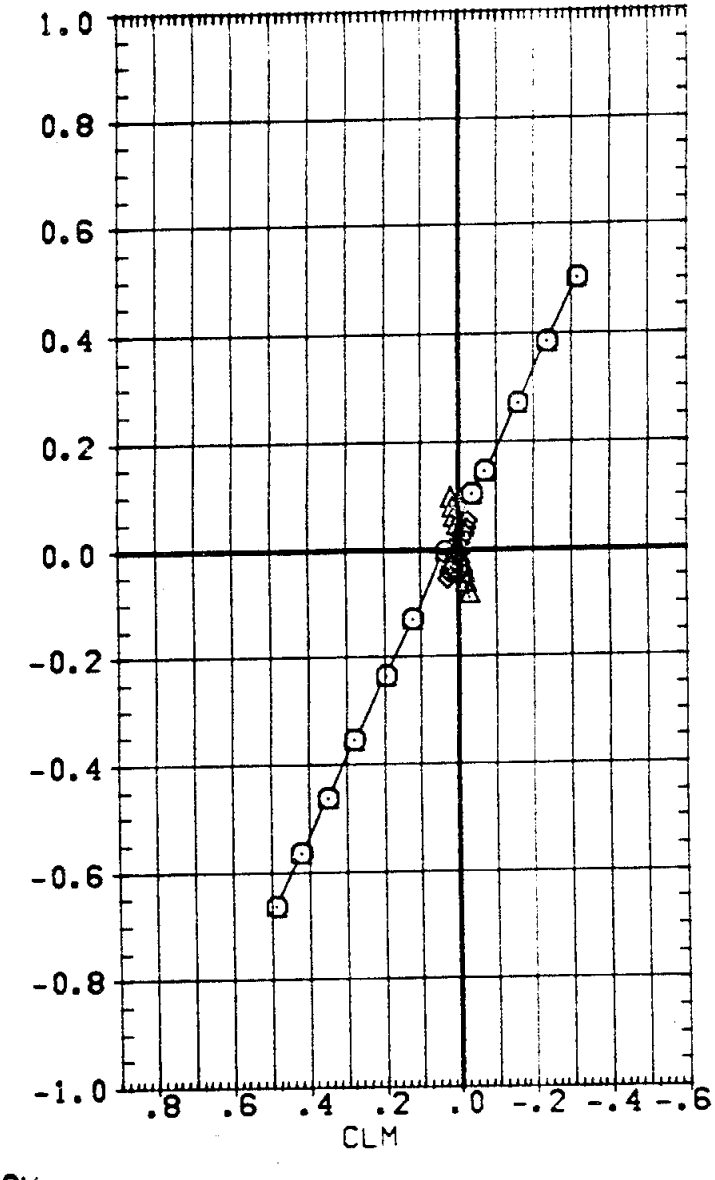
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

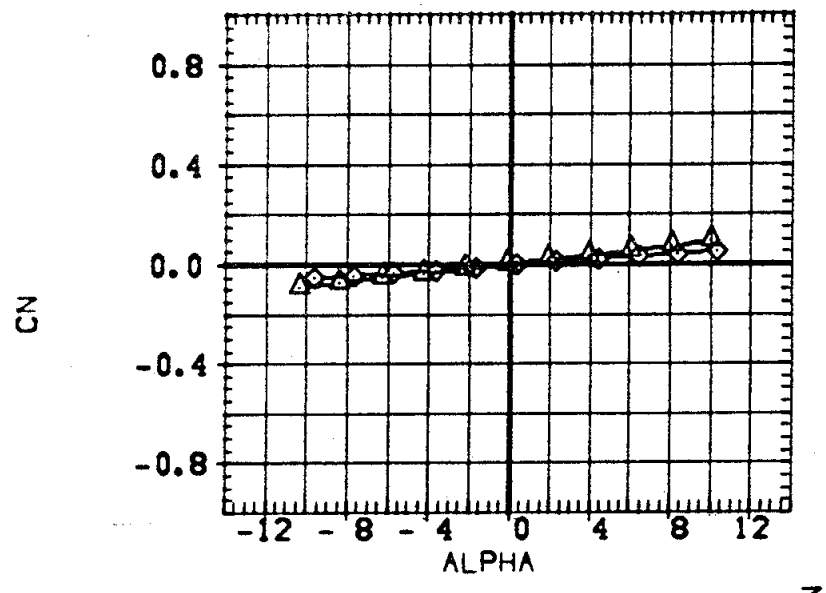
(B)MACH = 0.90

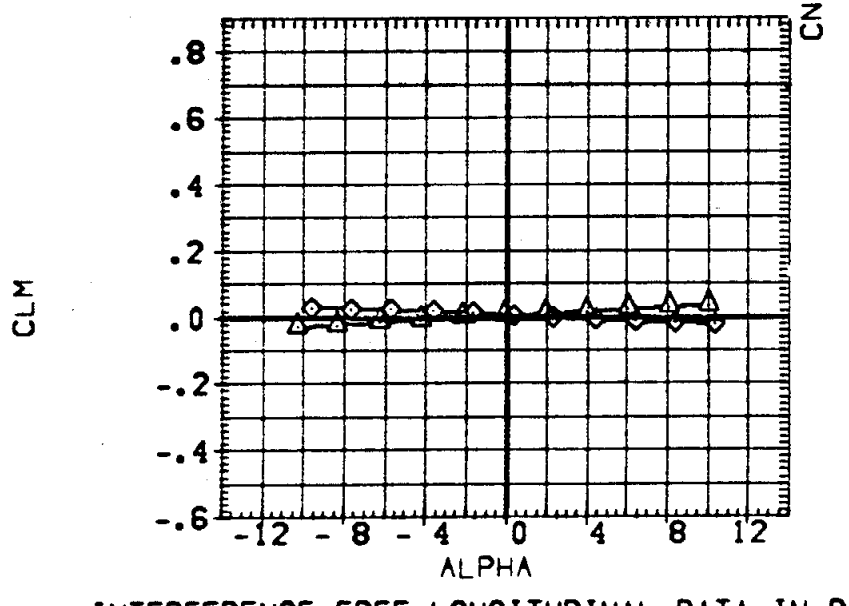
DATA SET SYMBOL CONFIGURATION DESCRIPTION

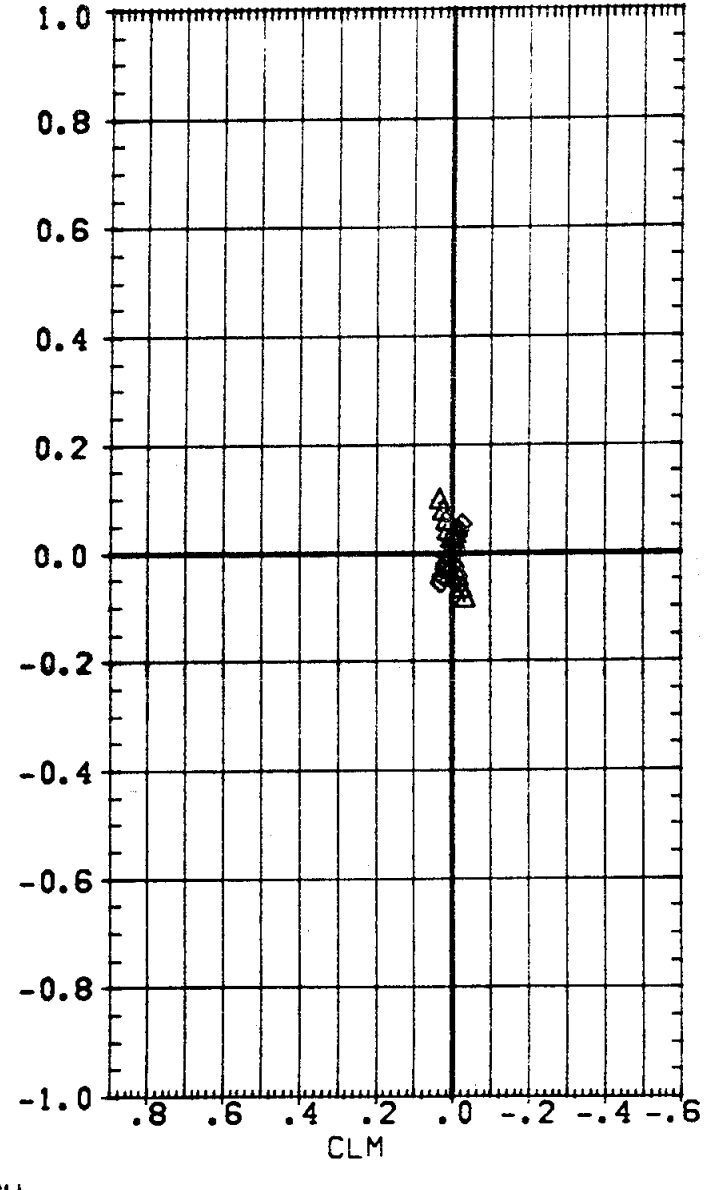
(A72501)	○	DATA NOT AVAILABLE
(A72601)	△	MSFC 545 (1A1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







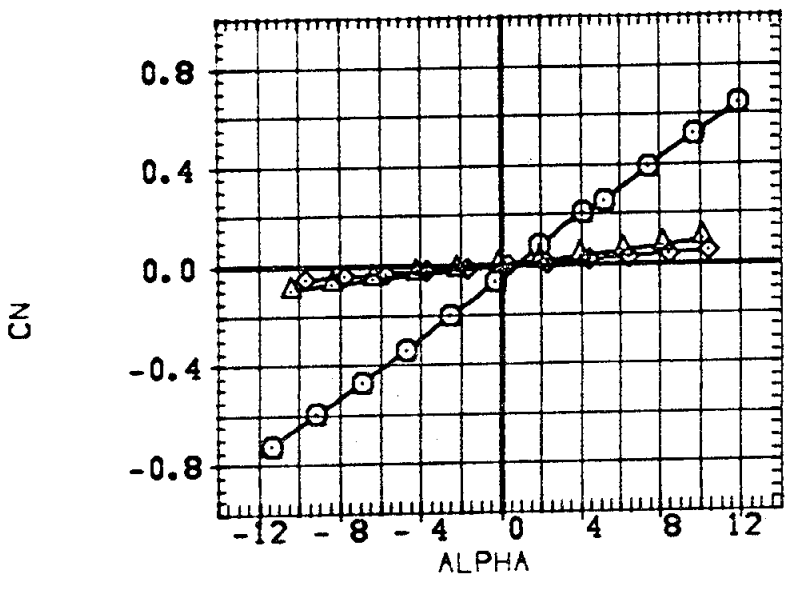
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

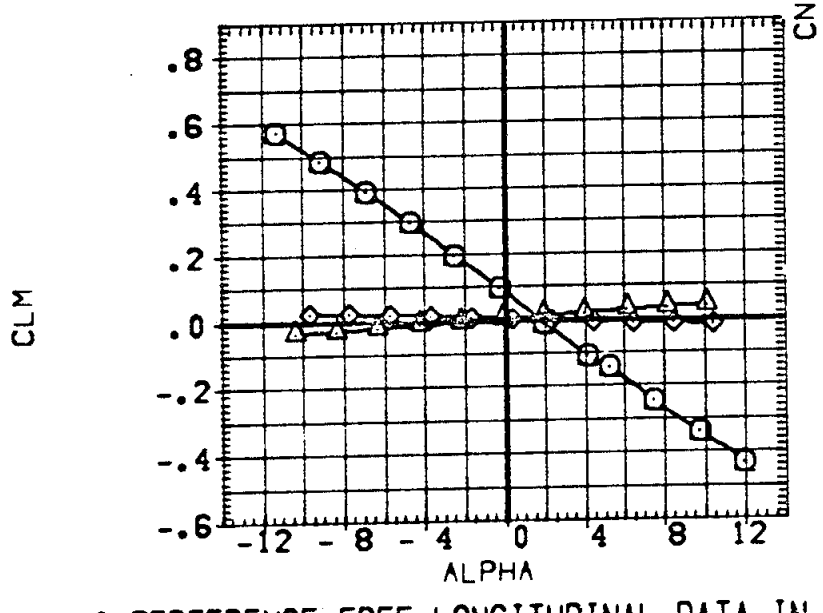
(C)MACH = 1.00

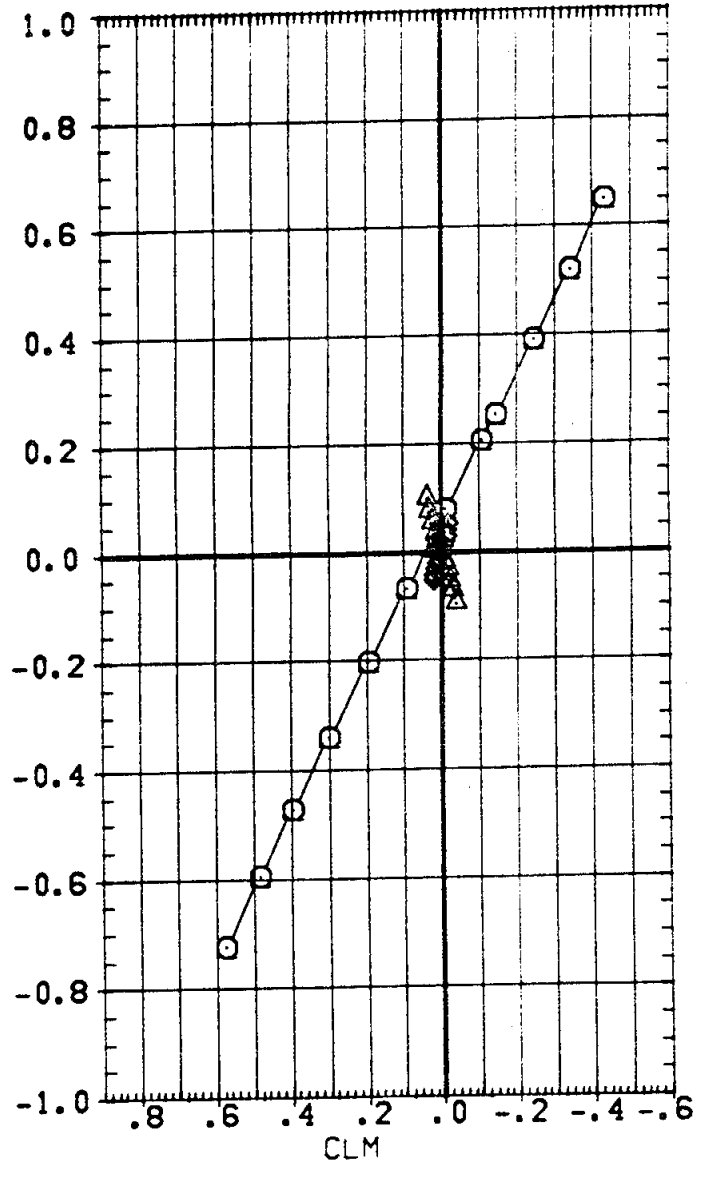
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (1A1) NAR ATP BL ORBITER-(01)
(A72601)	△	MSFC 545 (1A1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







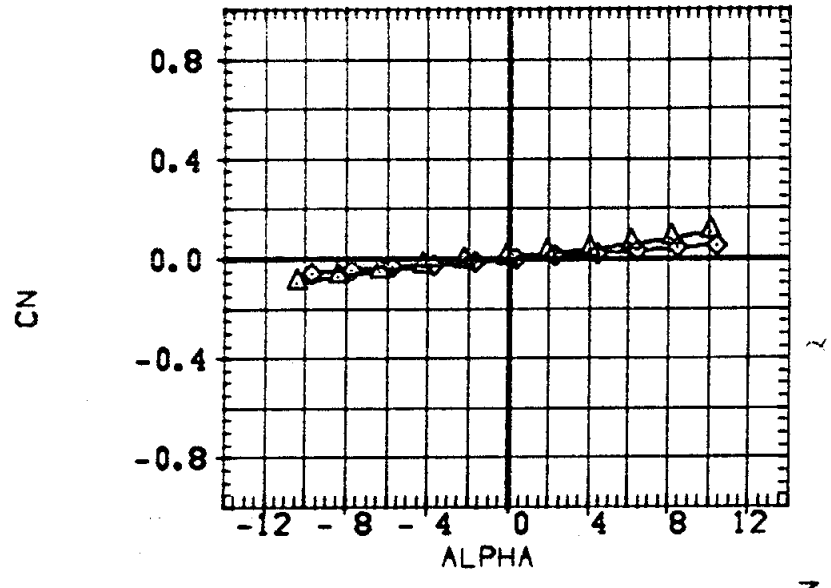
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

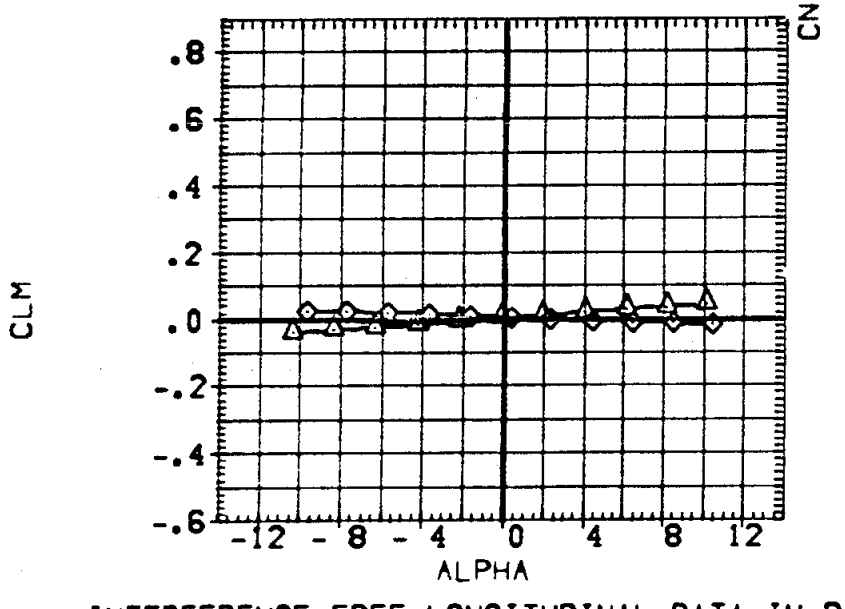
(D)MACH = 1.19

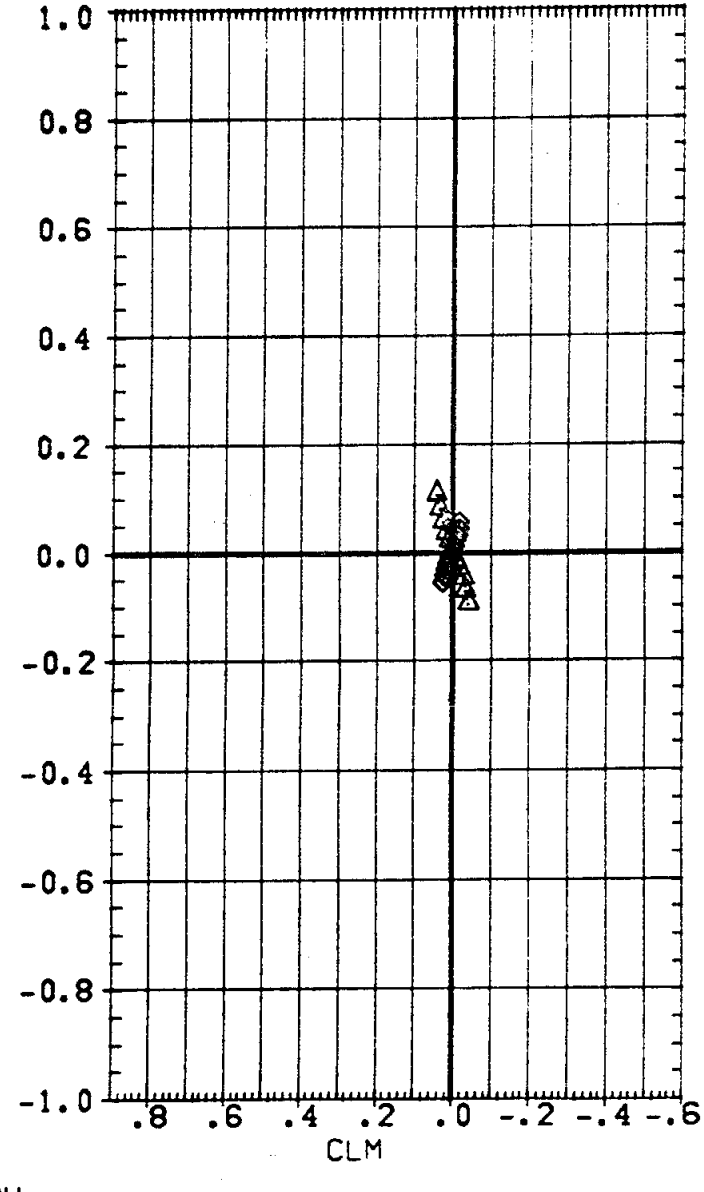
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	DATA NOT AVAILABLE
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







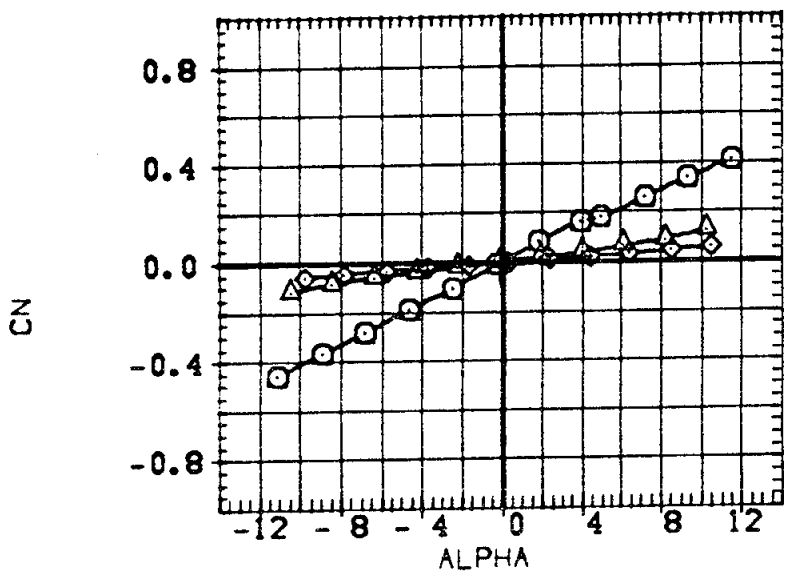
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

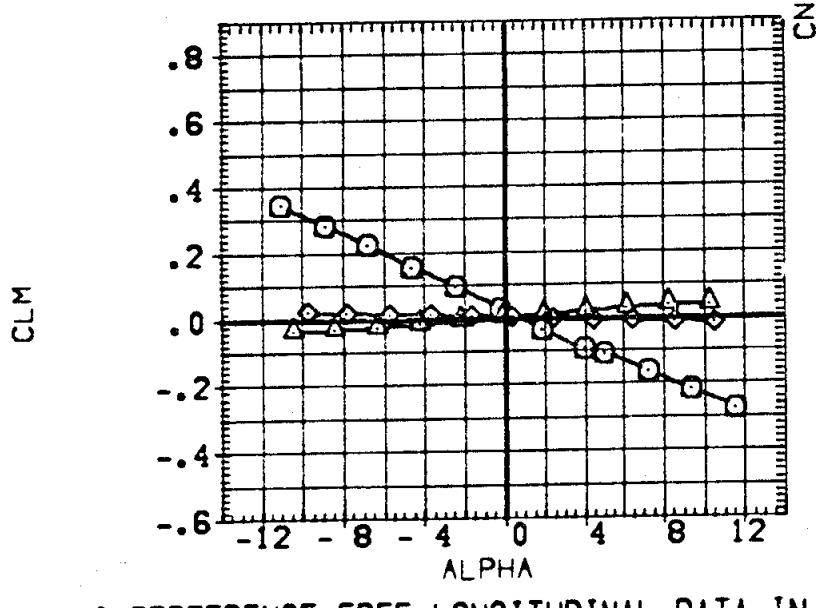
(E)MACH = 1.46

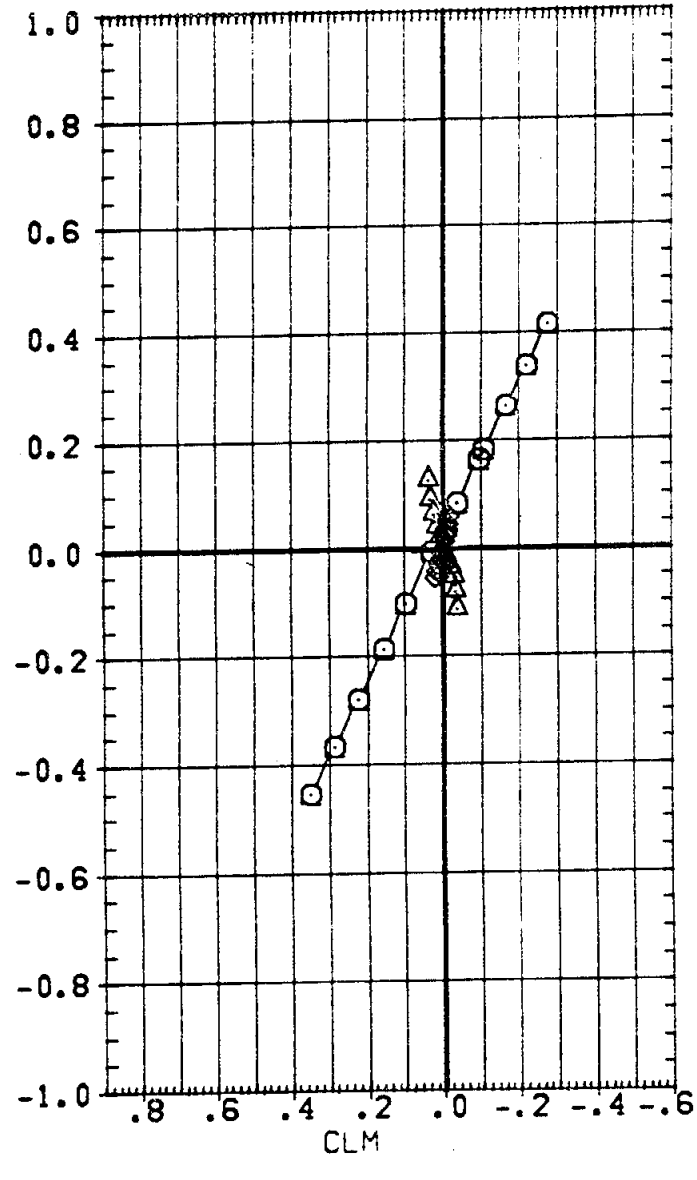
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T5)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







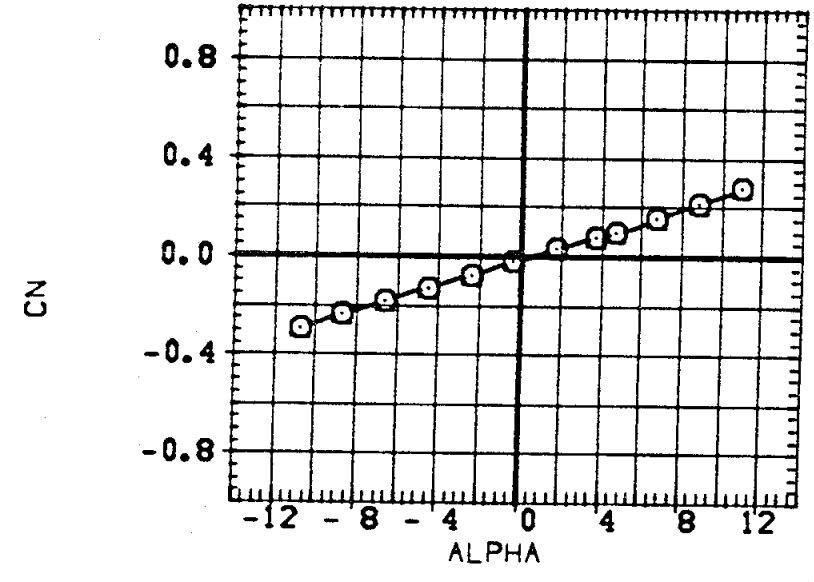
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

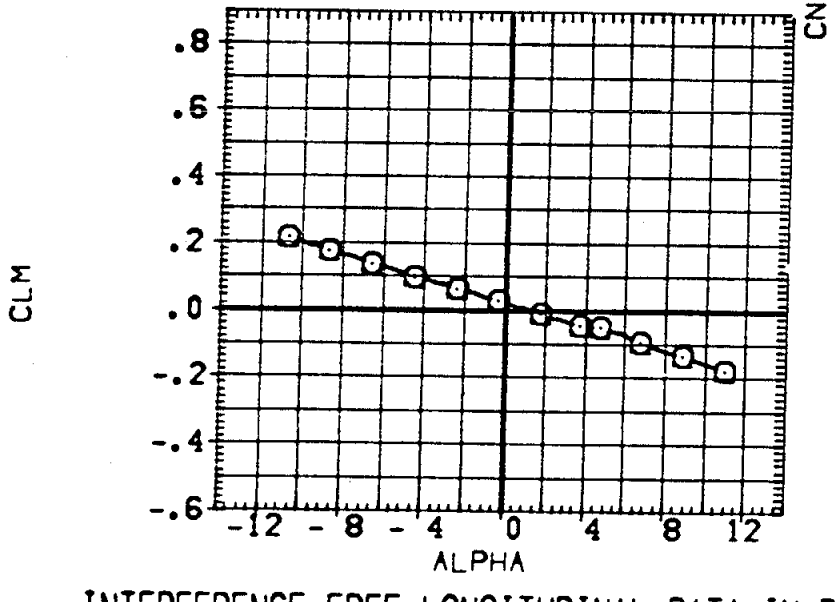
(F)MACH = 1.95

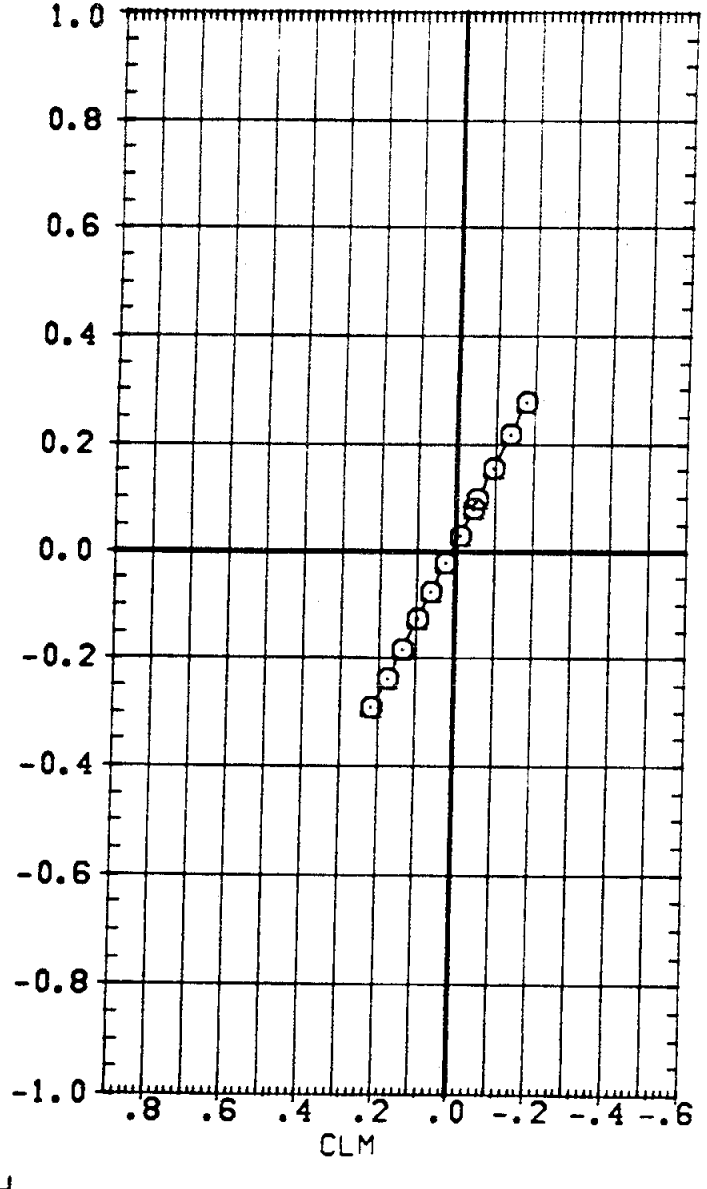
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72601)	△	DATA NOT AVAILABLE
(A72201)	◇	DATA NOT AVAILABLE

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







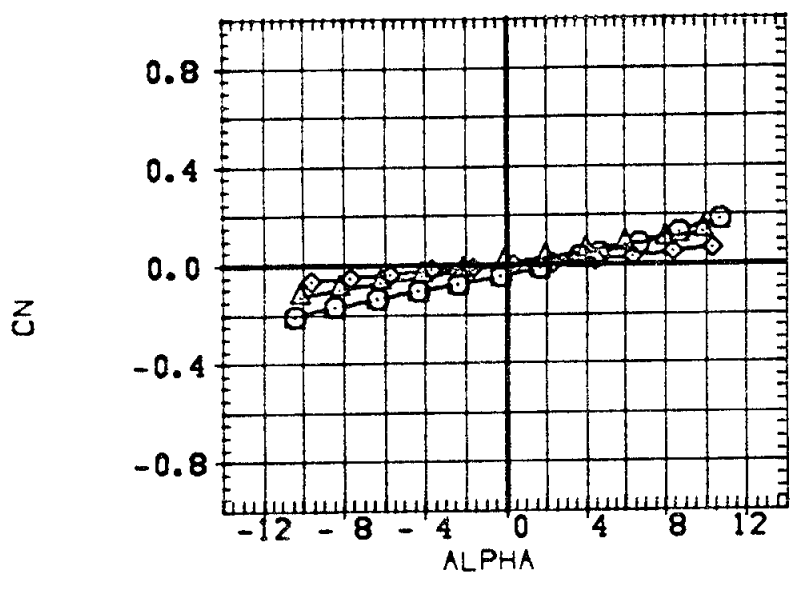
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

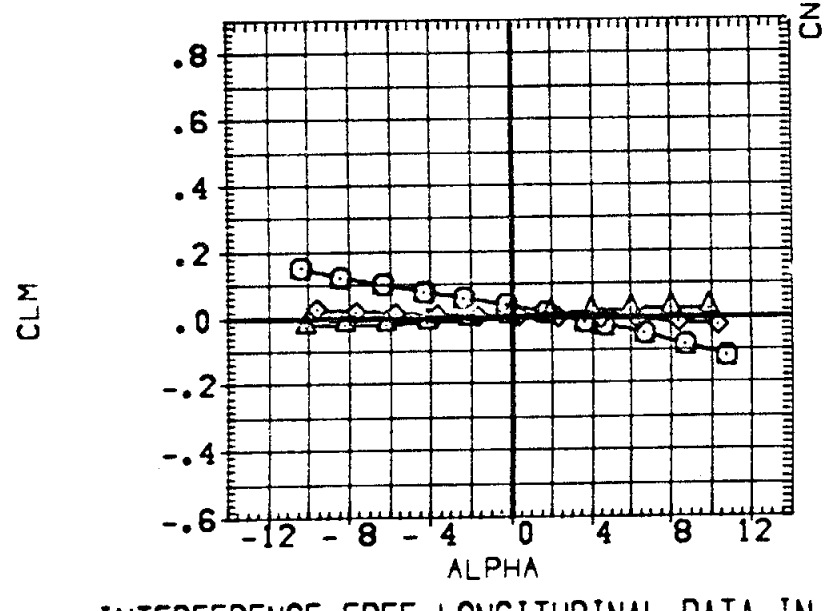
(G)MACH = 2.99

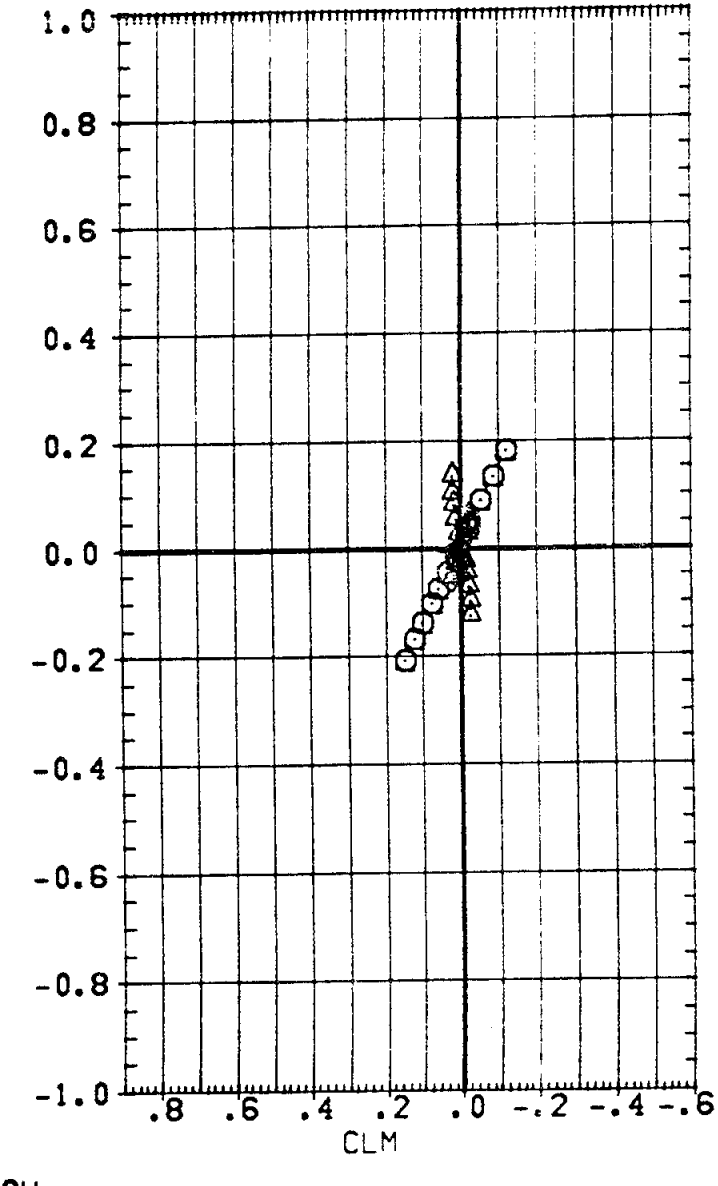
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(AP2601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(AP2201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







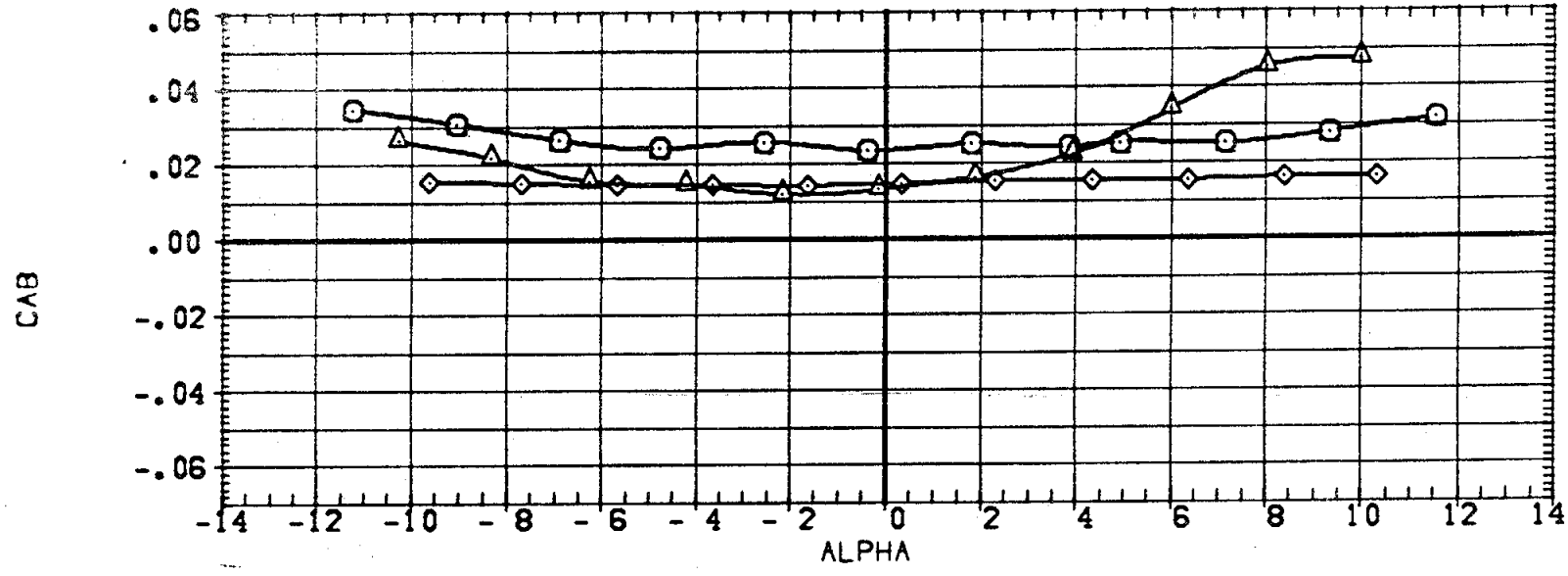
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

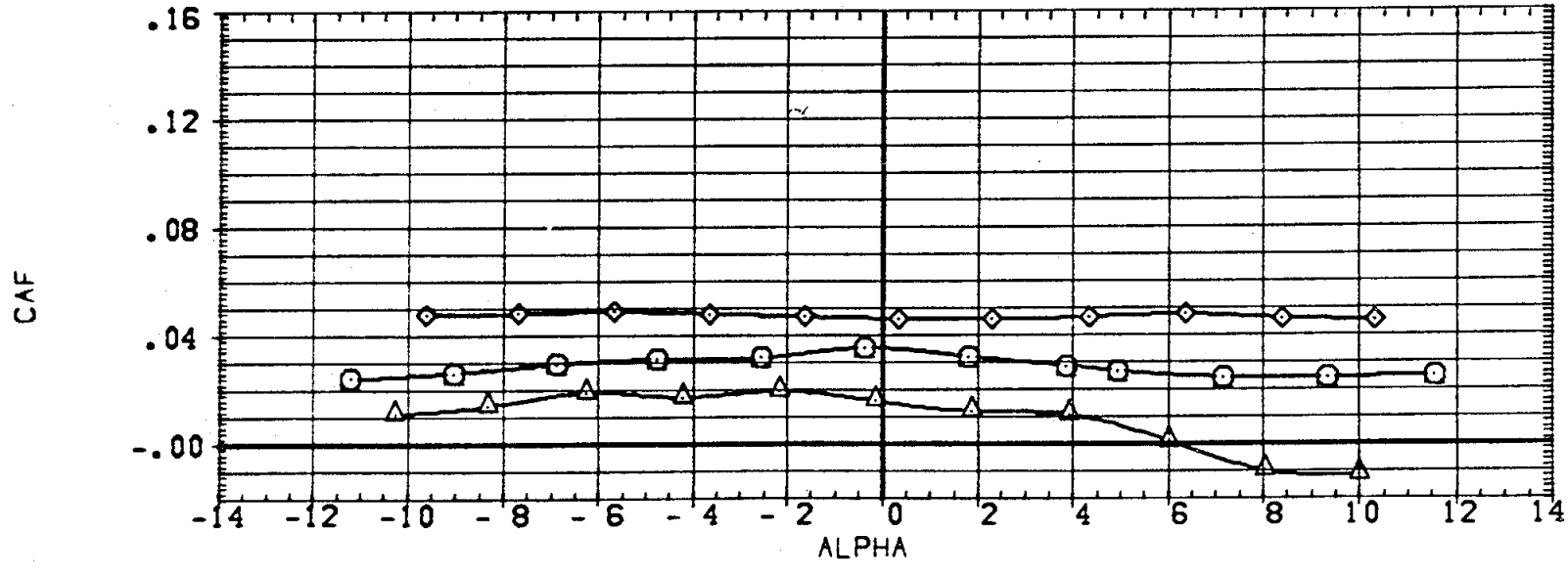
(H)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2501)	○	MSFC S4S (IA1) NAR ATP BL ORBITER-(O1)
(AP2601)	△	MSFC S4S (IA1) NAR ATP BL LV-(T3)
(AP2201)	◇	MSFC S4S (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATI

SREF	3220.0	SQ.FT.
LREF	1326.0	IN.
BREF	1326.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





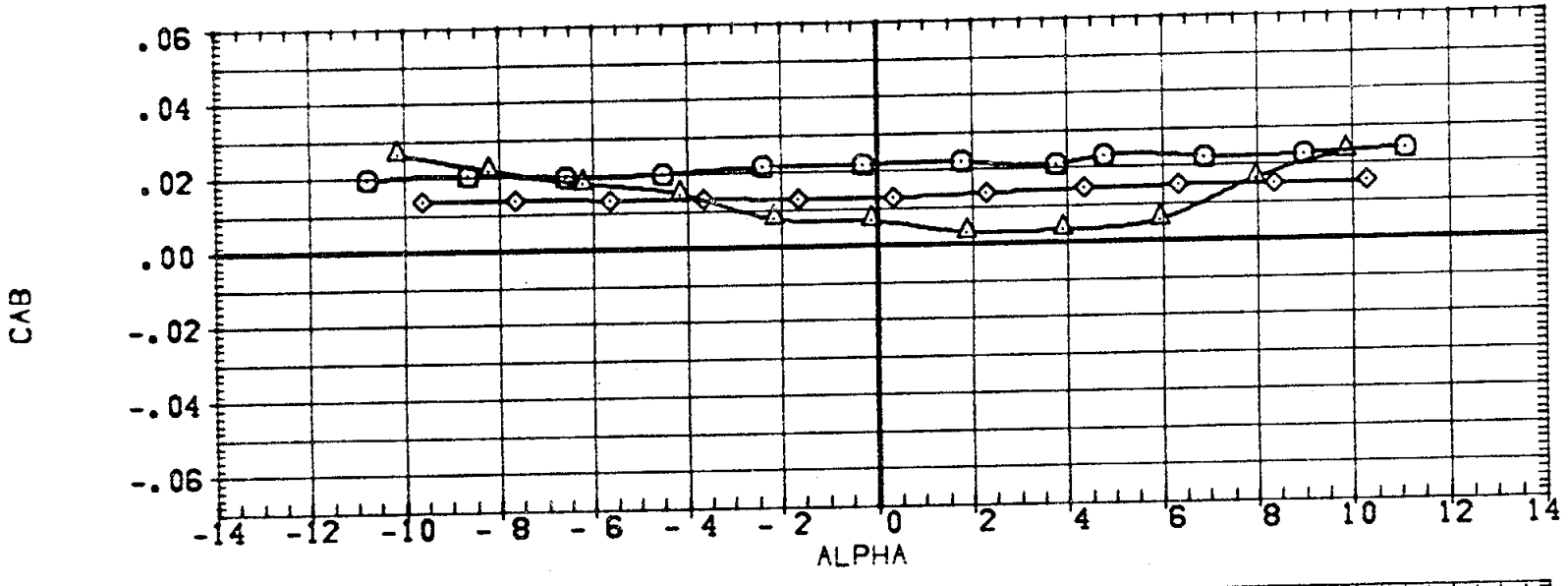
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

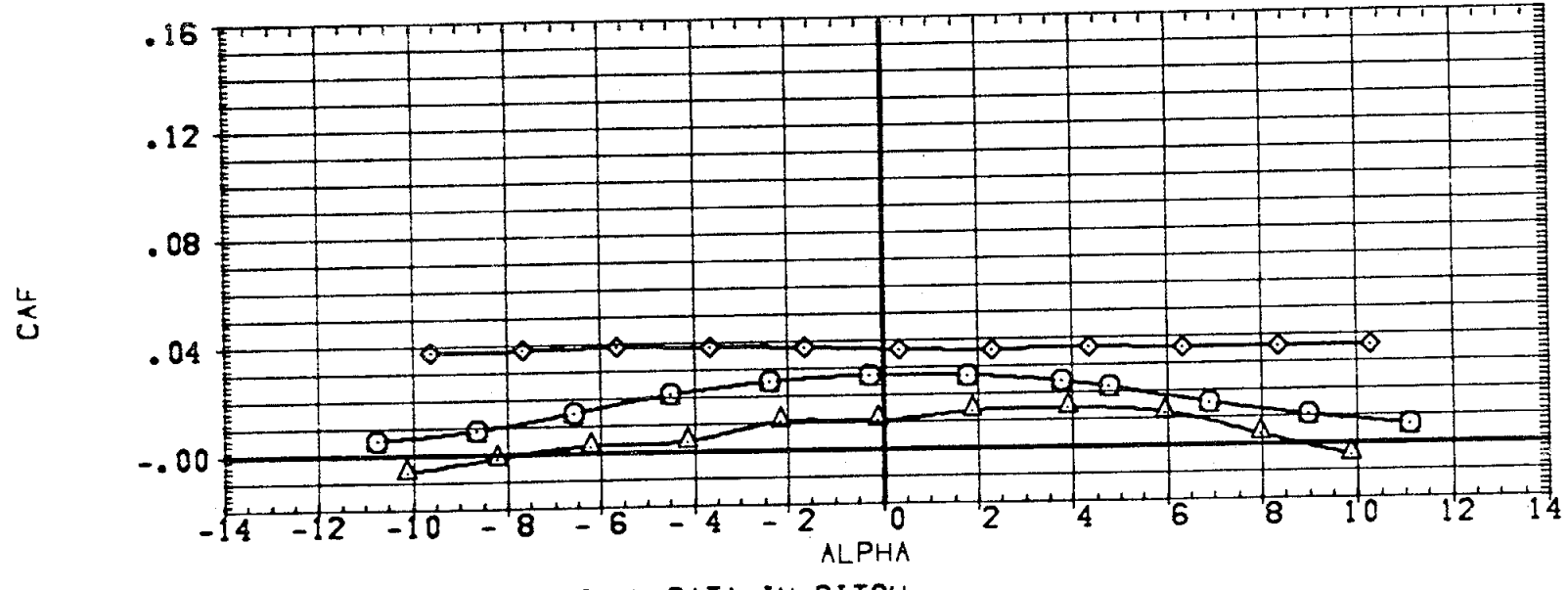
(B)MACH = 0.90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72601)	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72201)	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

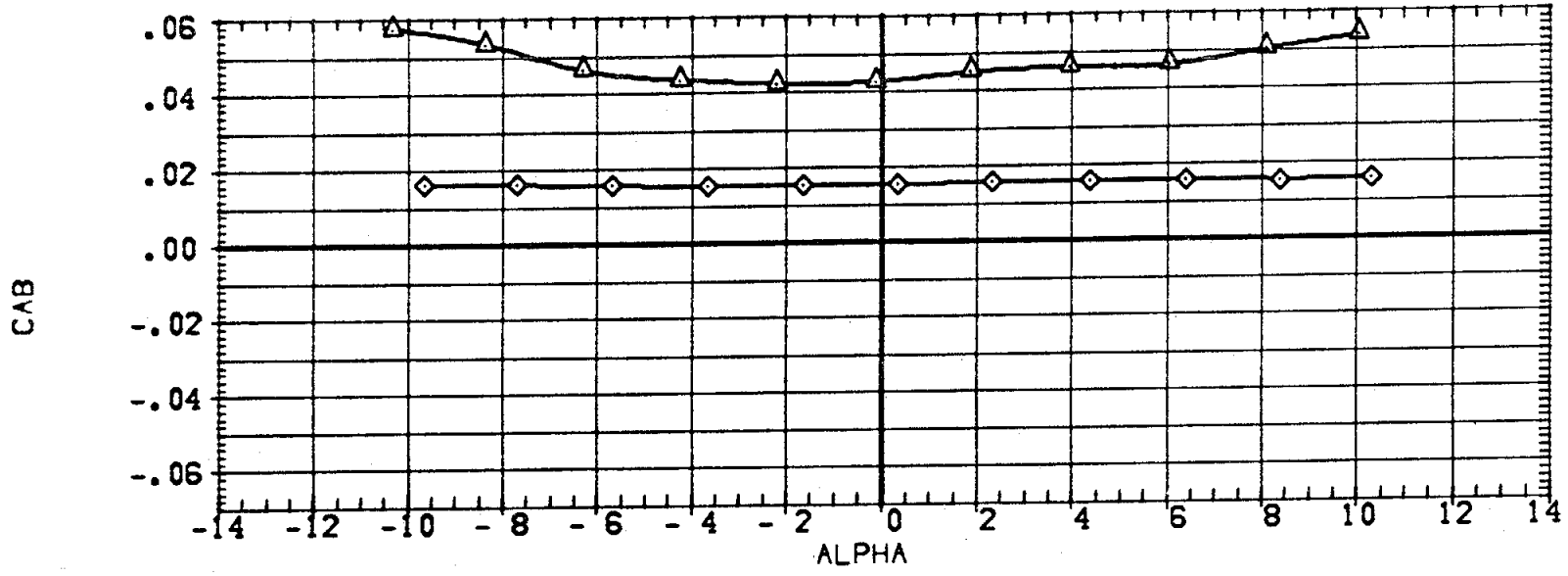
(A)MACH = 0.60

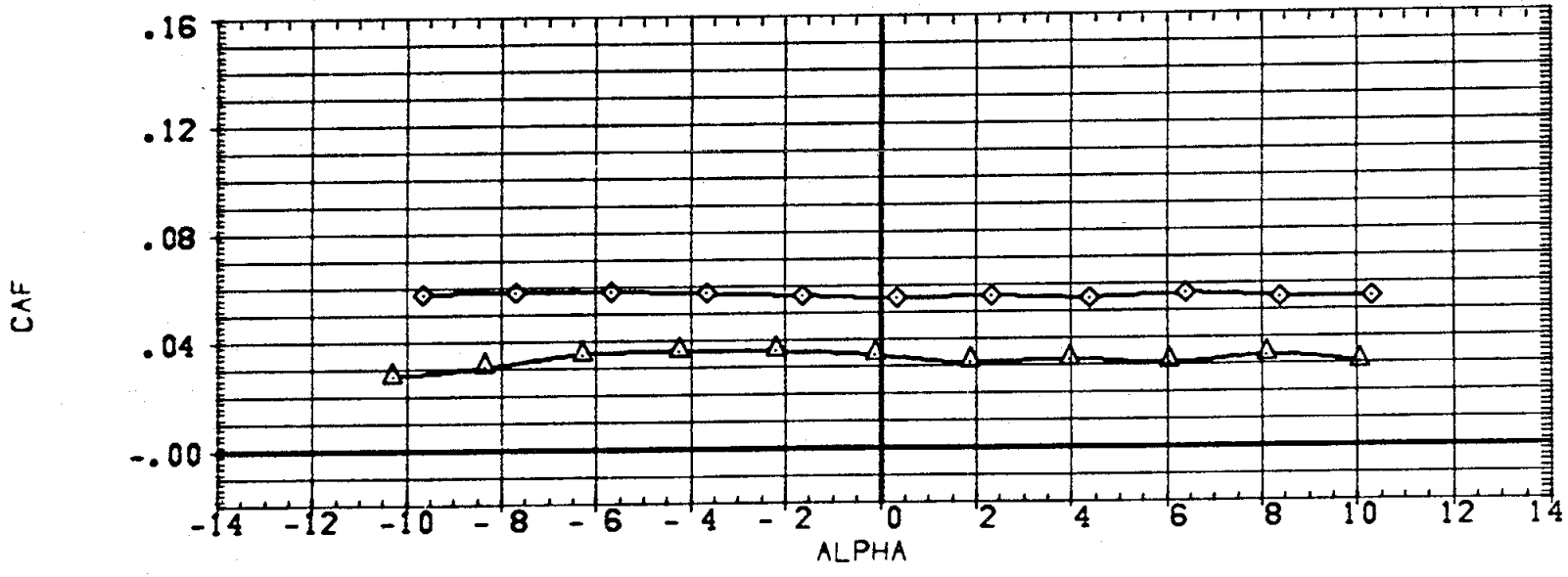
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A72501)	○	DATA NOT AVAILABLE
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(TS)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





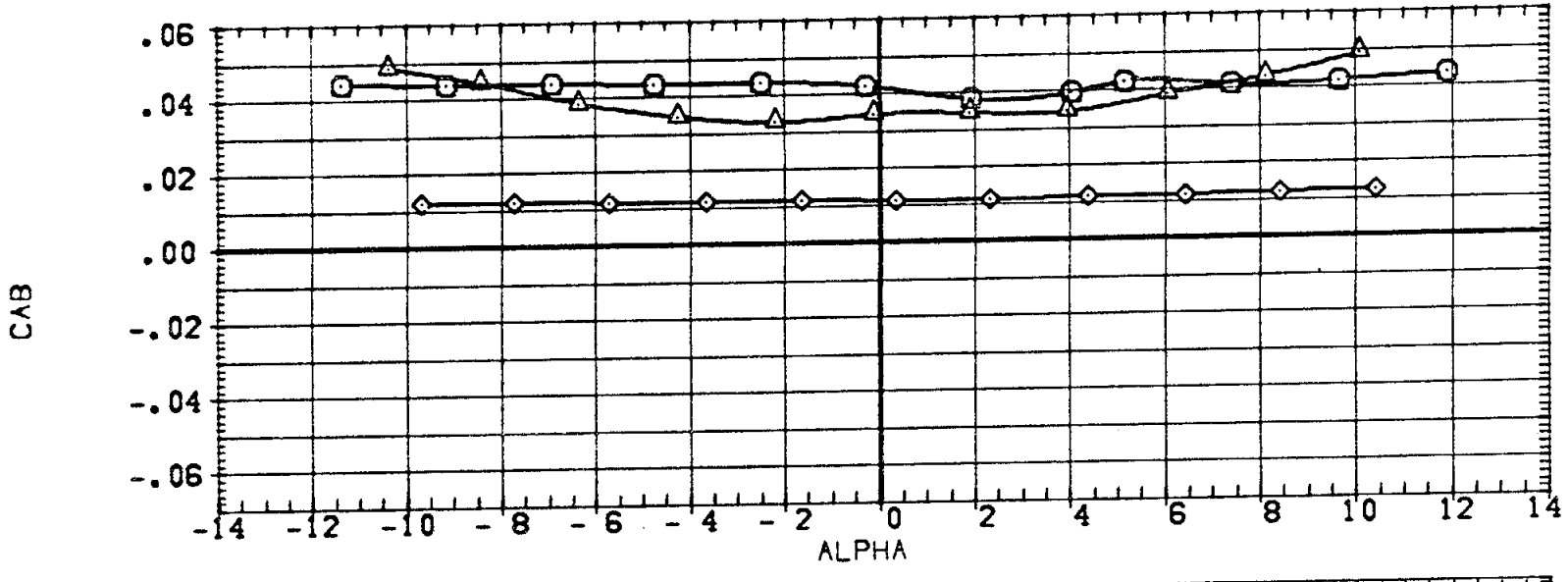
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

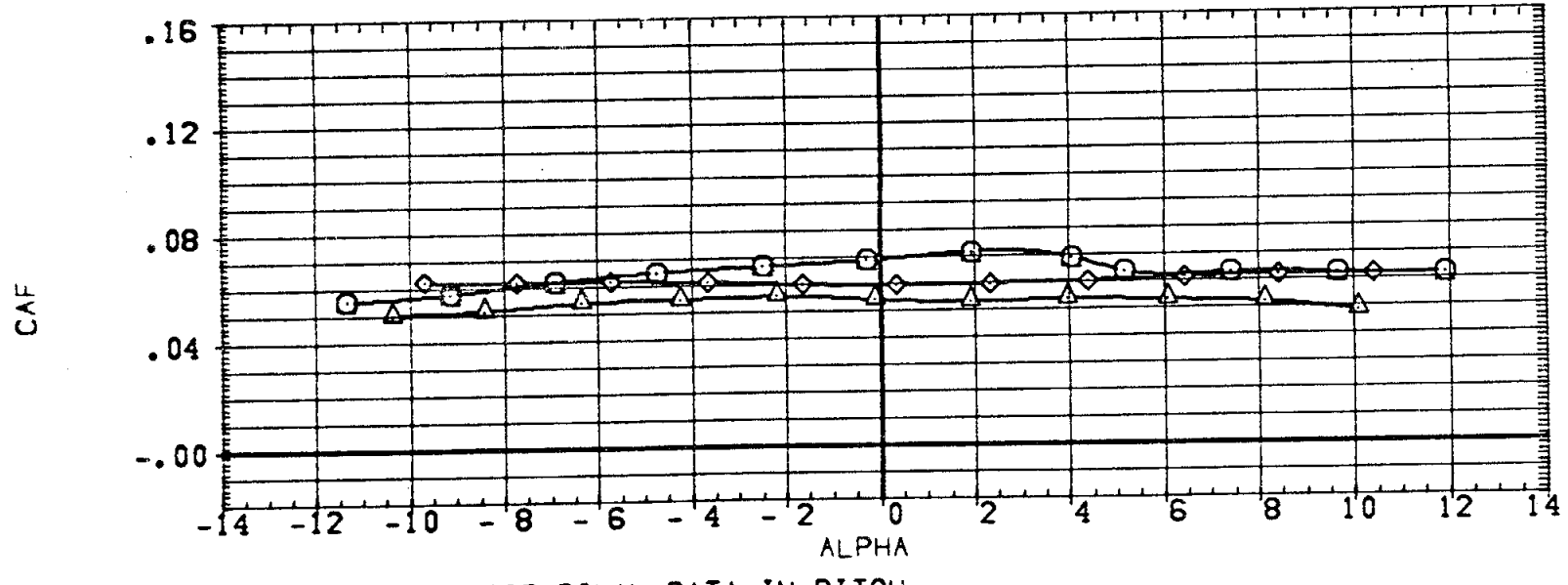
(C)MACH = 1.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





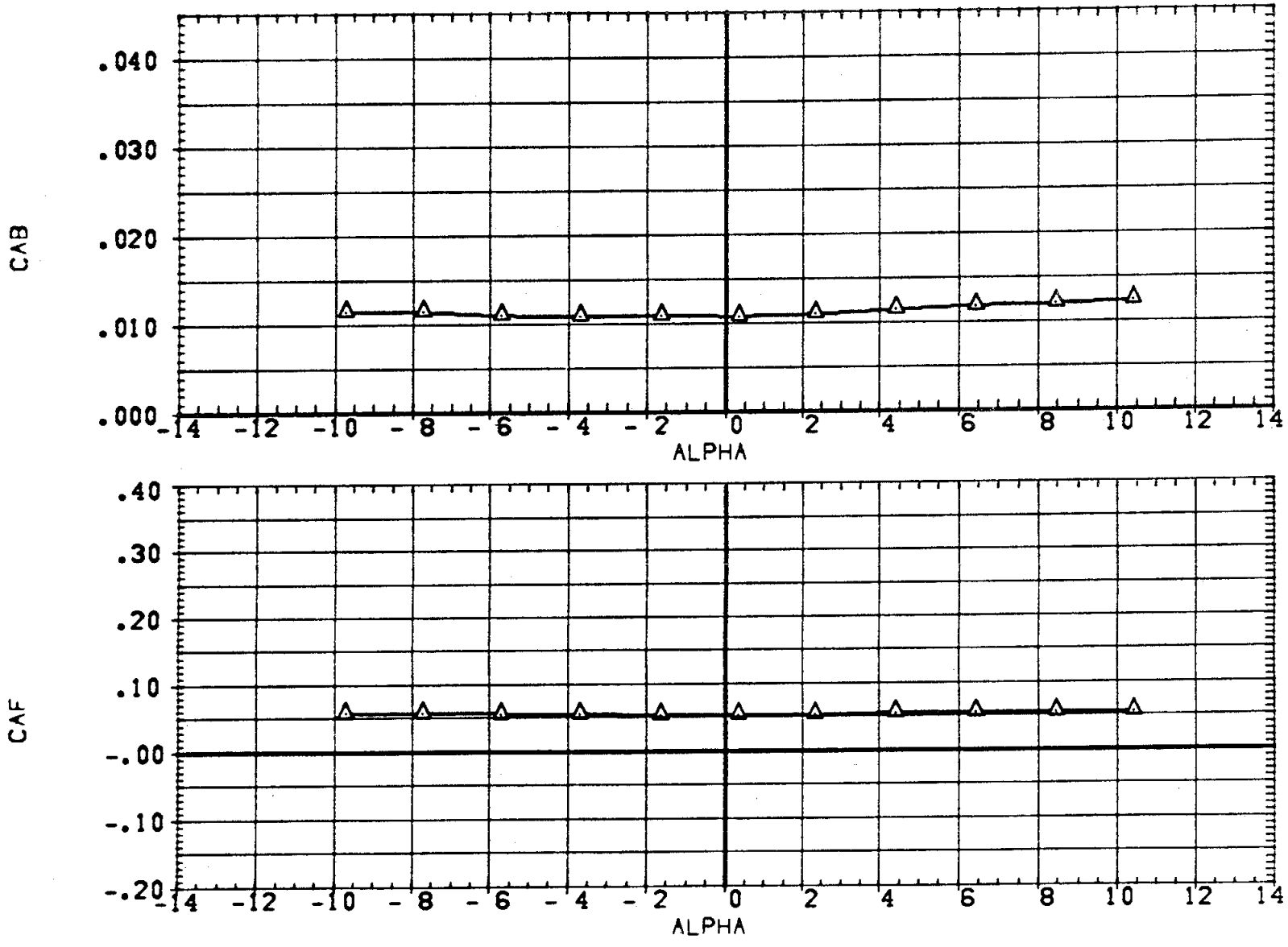
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

(D)MACH = 1.19

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(A72501) DATA NOT AVAILABLE
(A72201) MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



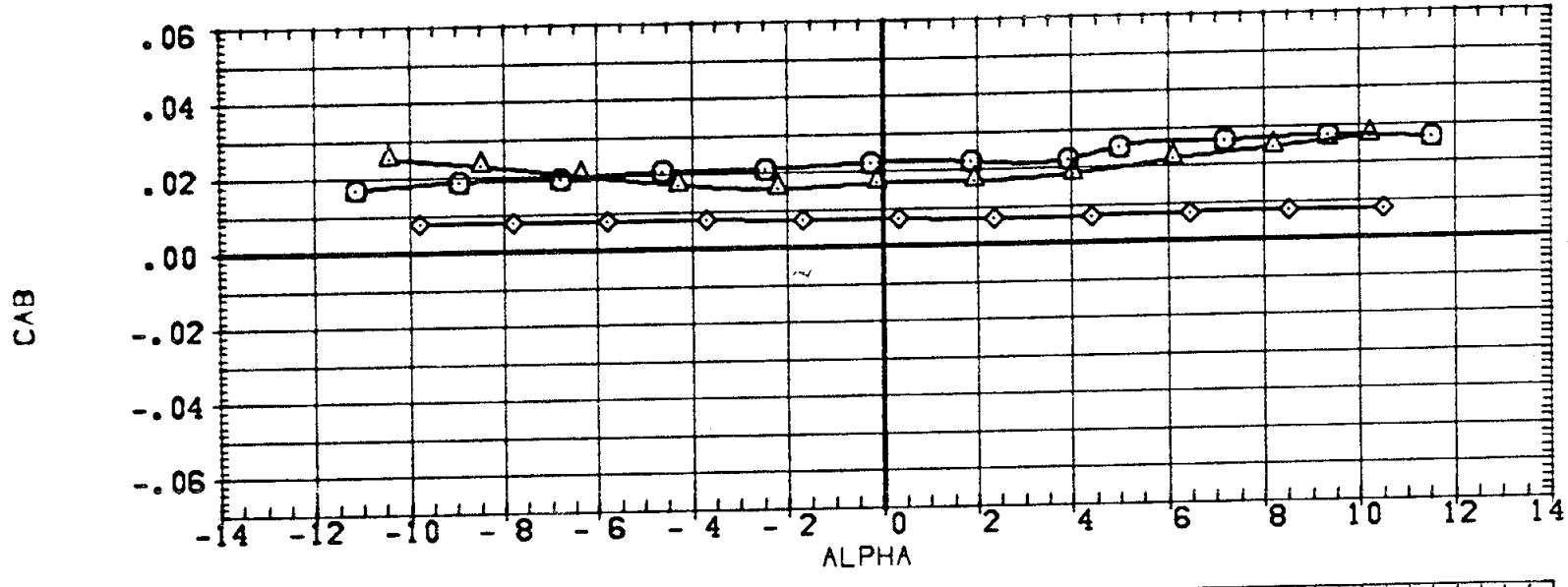
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

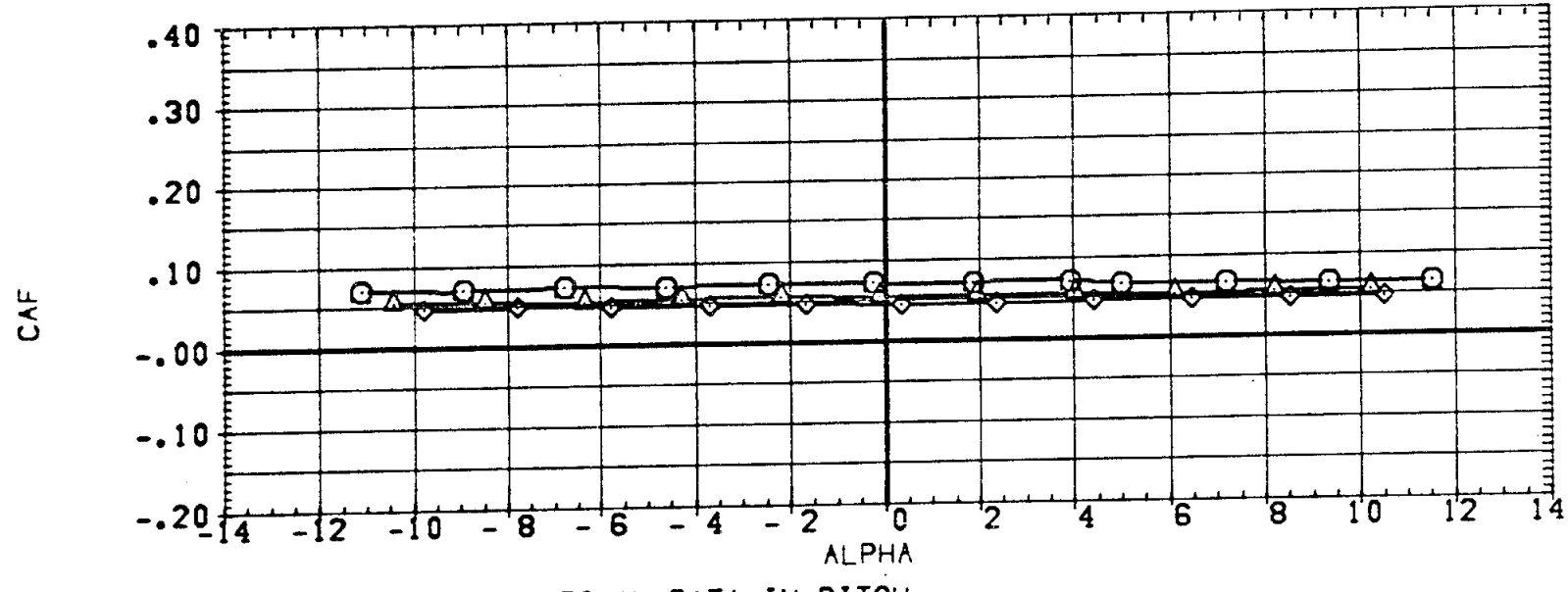
(E)MACH = 1.47

DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (1A1) NAR ATP BL ORBITER-(01)
(A72601)	△	MSFC 545 (1A1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(31/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





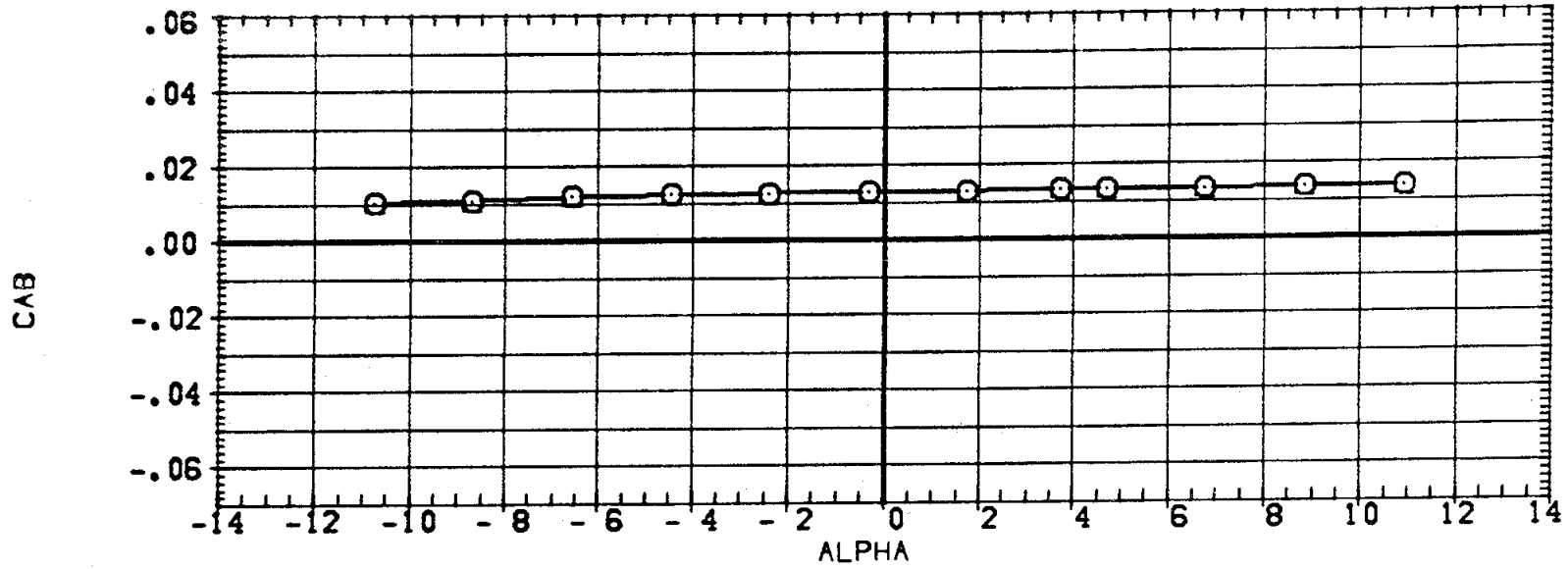
INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

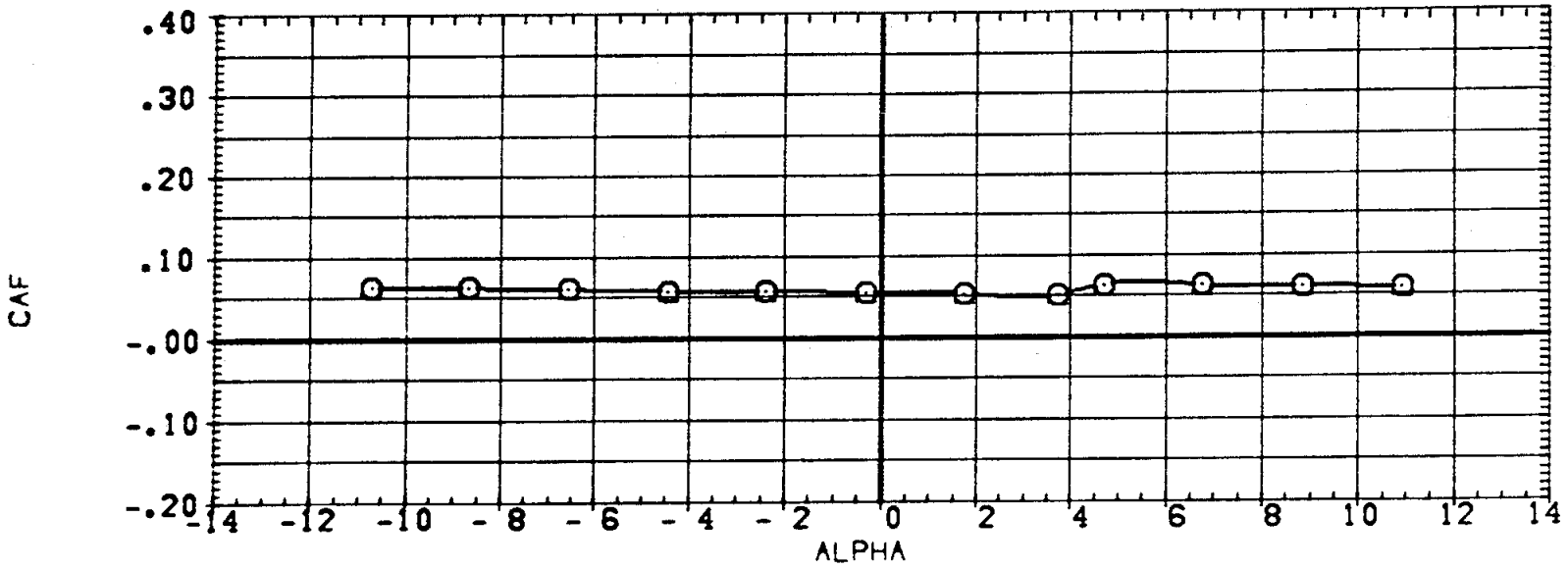
(F)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 54S (IA1) NAR ATP BL ORBITER-(01)
(A72601)	△	DATA NOT AVAILABLE
(A72201)	◇	DATA NOT AVAILABLE

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

(G)MACH = 2.99

DATA SET SYMBOL CONFIGURATION DESCRIPTION

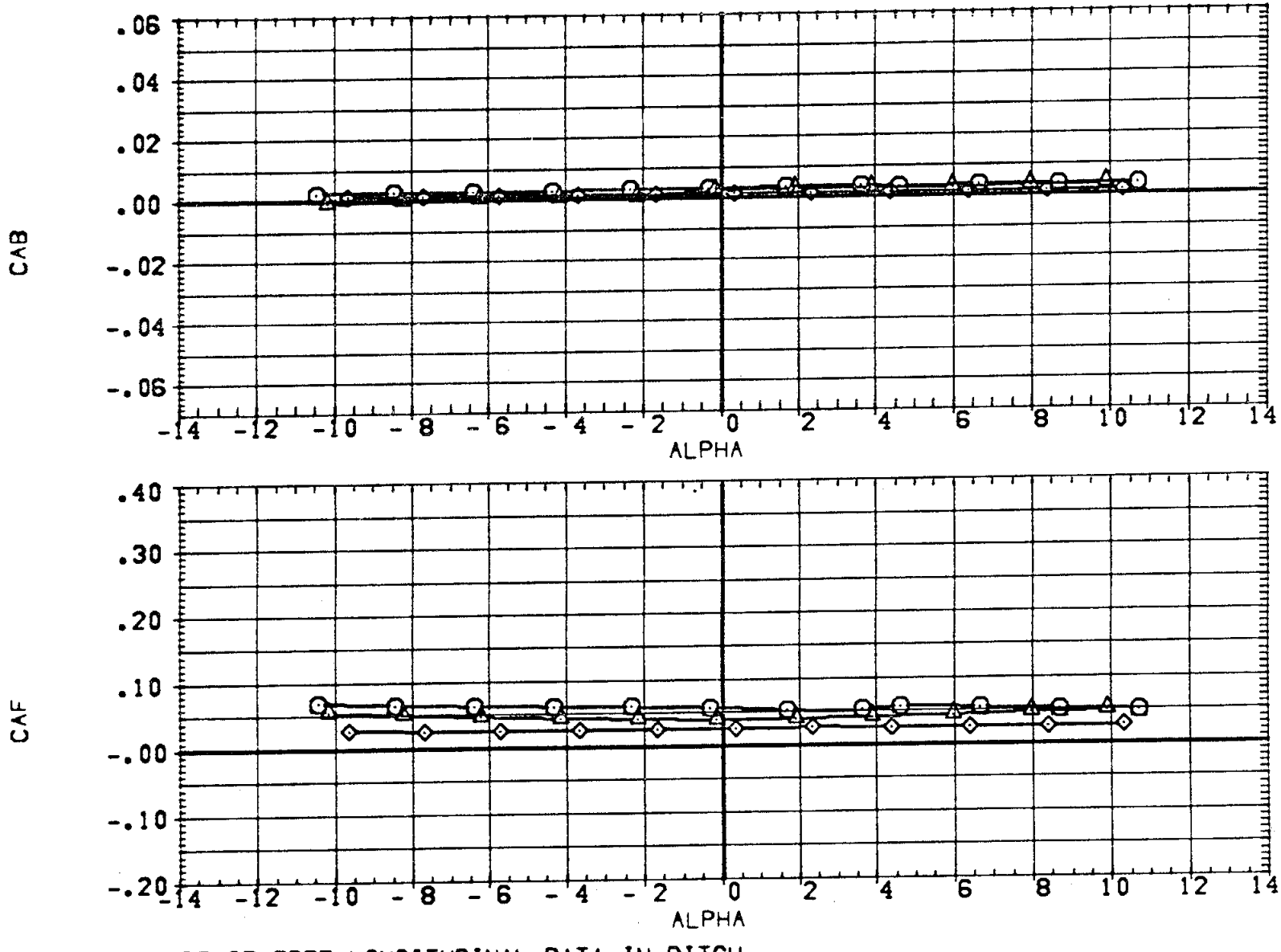
(A72501) ○ MSFC 545 (1A1) NAR ATP BL ORBITER-(01)

(A72601) △ MSFC 545 (1A1) NAR ATP BL LV-(T5)

(A72201) ◇ MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1326.0	IN.
BREF	1326.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



INTERFERENCE FREE LONGITUDINAL DATA IN PITCH

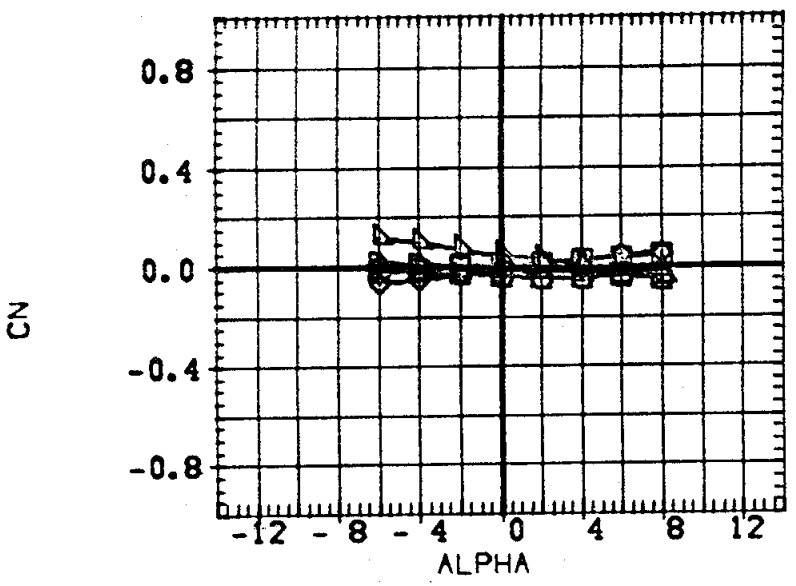
(H)MACH = 4.96

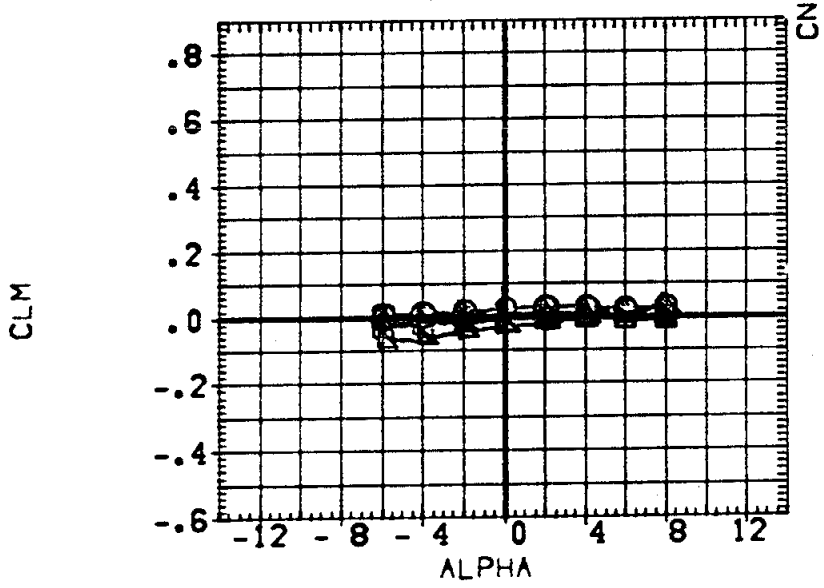
DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)	○	MSFC 545 (IA1)	TANK ON ORBITER
(R72B01)	□	MSFC 545 (IA1)	ORBITER ON TANK
(R72C02)	◇	MSFC 545 (IA1)	SRB ON TANK
(R72D04)	△	MSFC 545 (IA1)	TANK ON SRB
(R72E02)	▷	MSFC 545 (IA1)	SRB ON ORBITER
(R72F06)	⬡	MSFC 545 (IA1)	ORBITER ON SRB

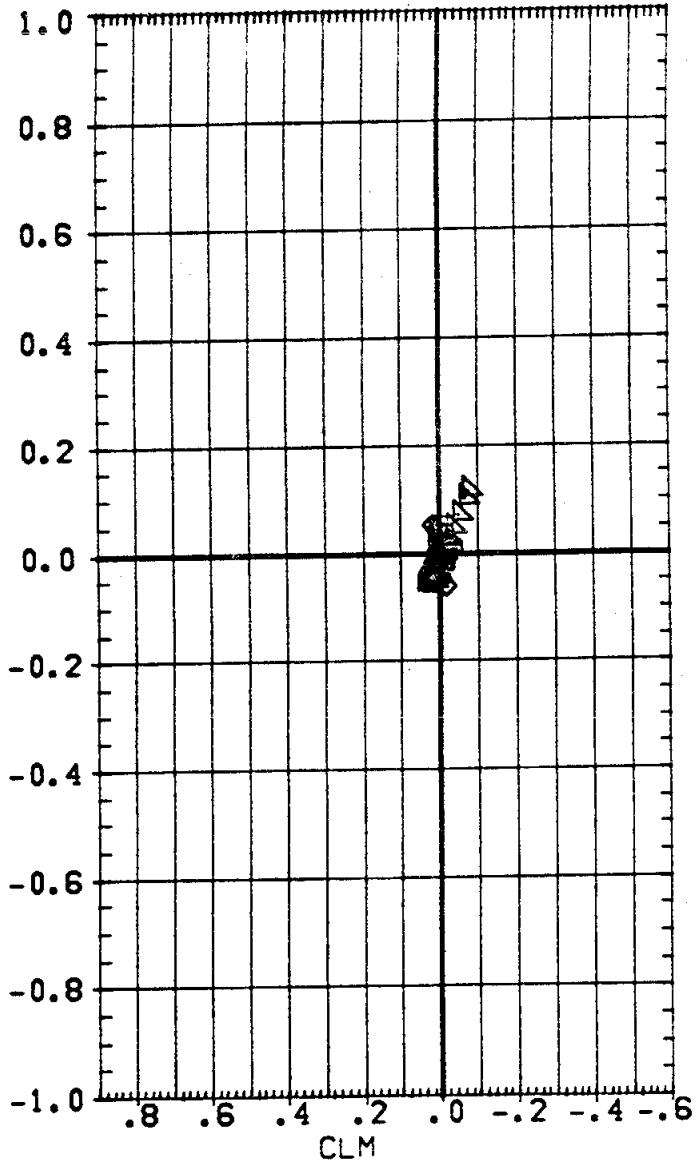
ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

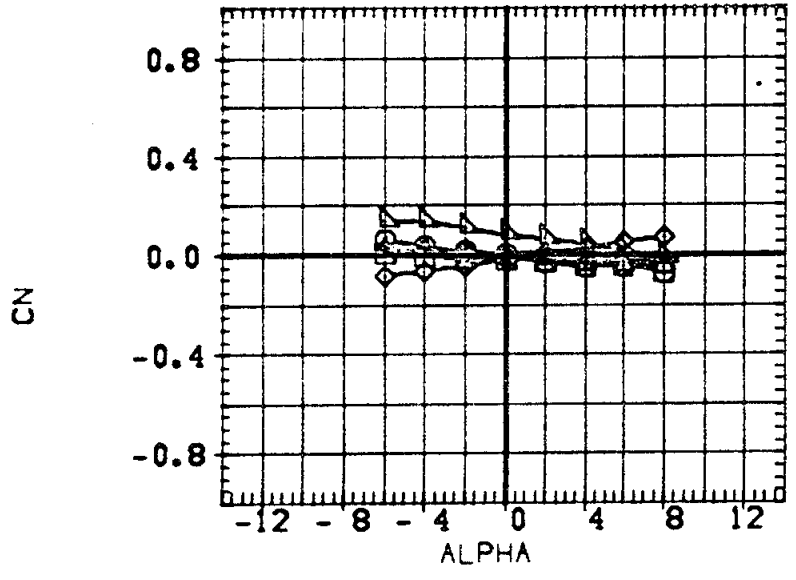
(A)MACH = 0.60

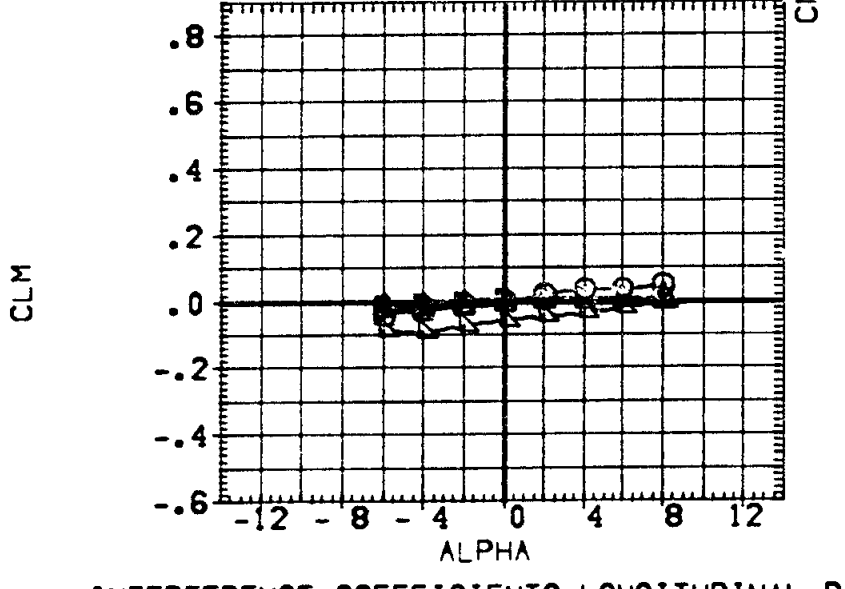
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		
(R72A01)		MSFC 545 (IA1)	TANK ON ORBITER
(R72B01)		MSFC 545 (IA1)	ORBITER ON TANK
(R72C02)		MSFC 545 (IA1)	SRB ON TANK
(R72D04)		DATA NOT AVAILABLE	
(R72E02)		MSFC 545 (IA1)	SRB ON ORBITER
(R72F06)		MSFC 545 (IA1)	ORBITER ON SRB

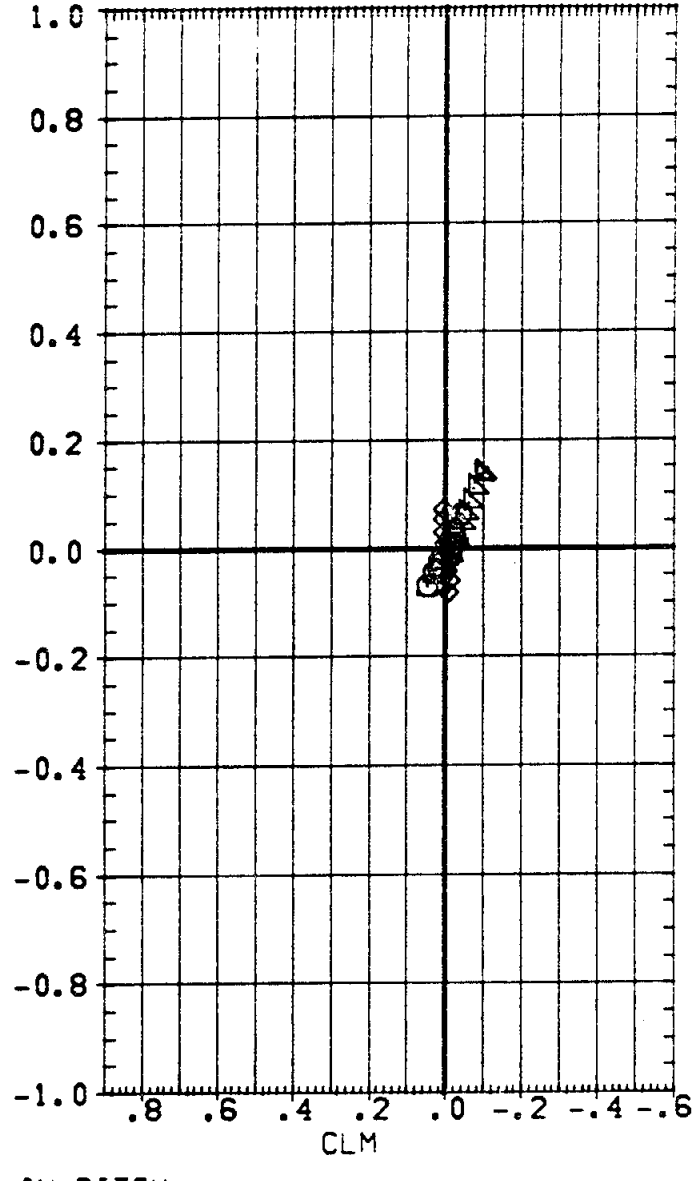
ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

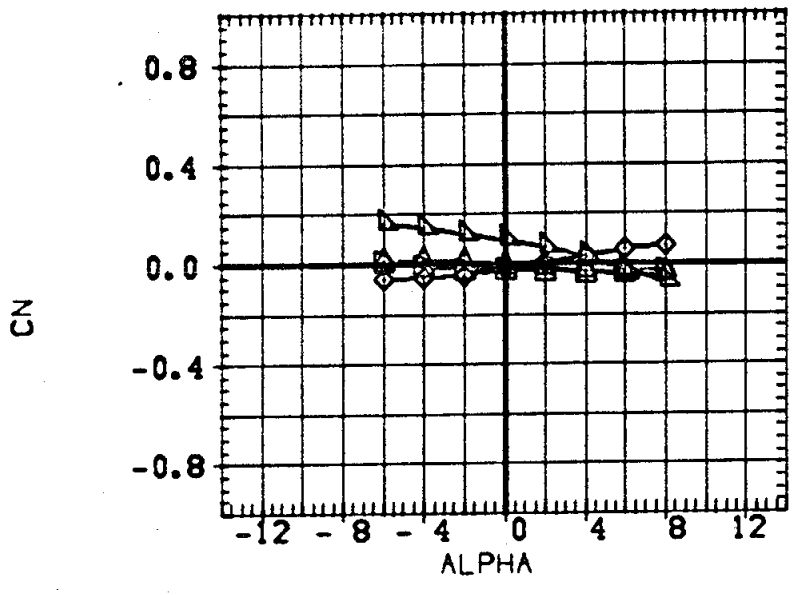
(B)MACH = 0.90

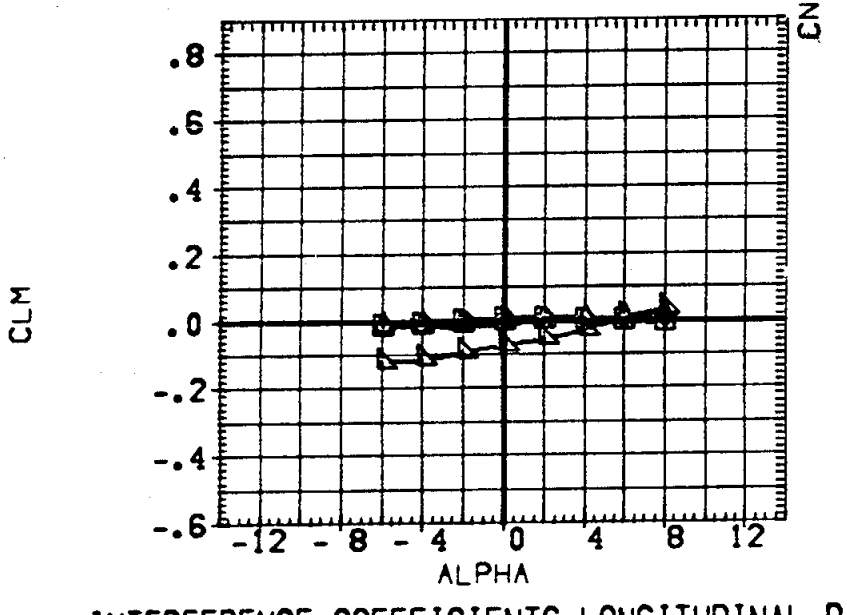
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(R72A01)	◇	DATA NOT AVAILABLE
(R72B01)	□	MSFC 545 (IA1) ORBITER ON TANK
(R72C02)	○	MSFC 545 (IA1) SRB ON TANK
(R72D04)	△	DATA NOT AVAILABLE
(R72E02)	▽	MSFC 545 (IA1) SRB ON ORBITER
(R72F06)	⬡	MSFC 545 (IA1) ORBITER ON SRB

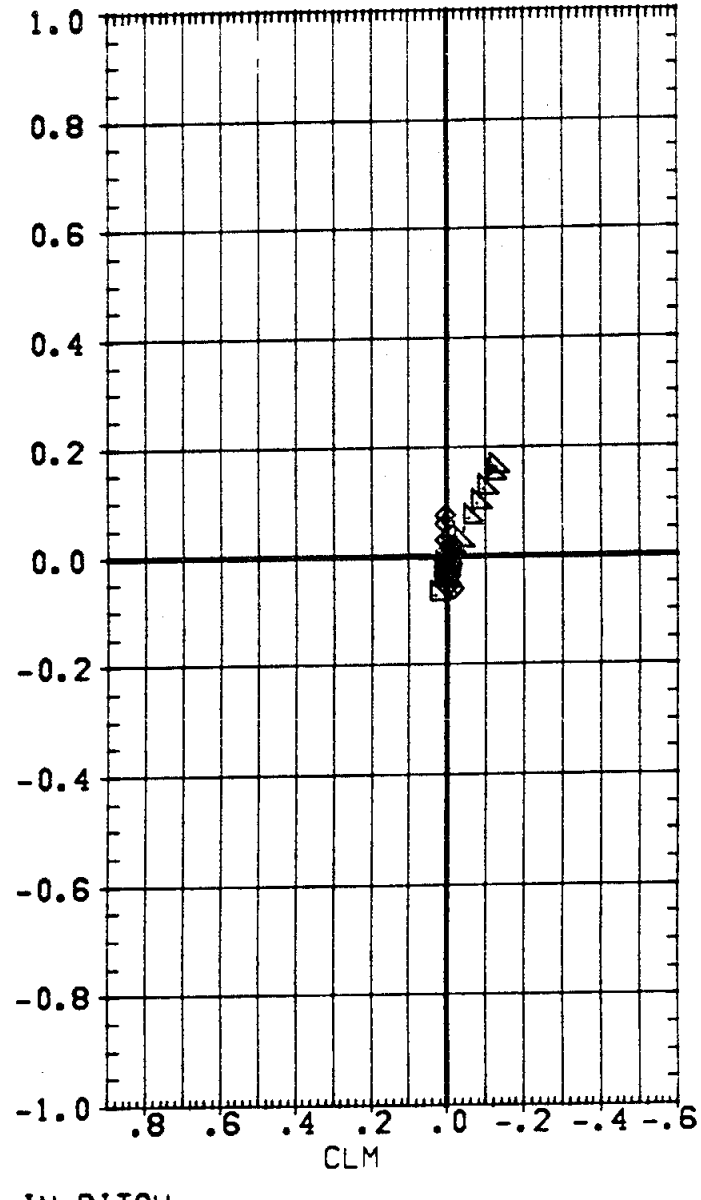
ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

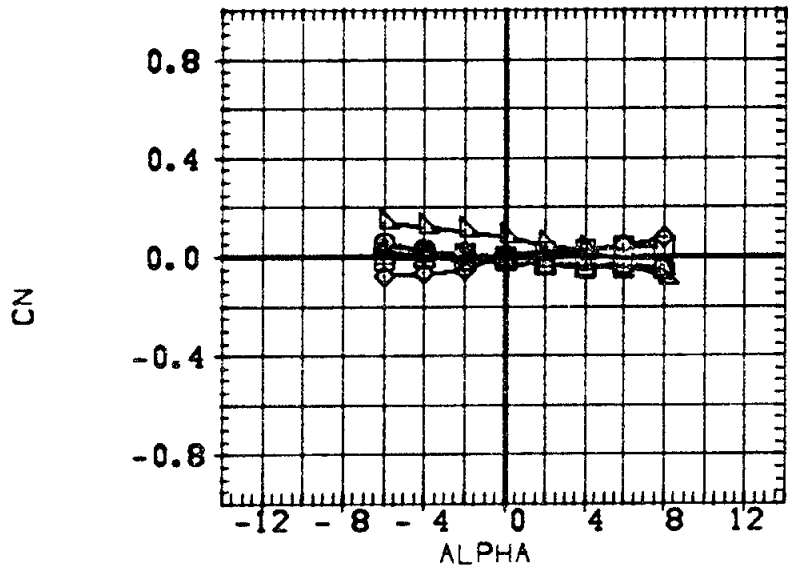
(C)MACH = 1.00

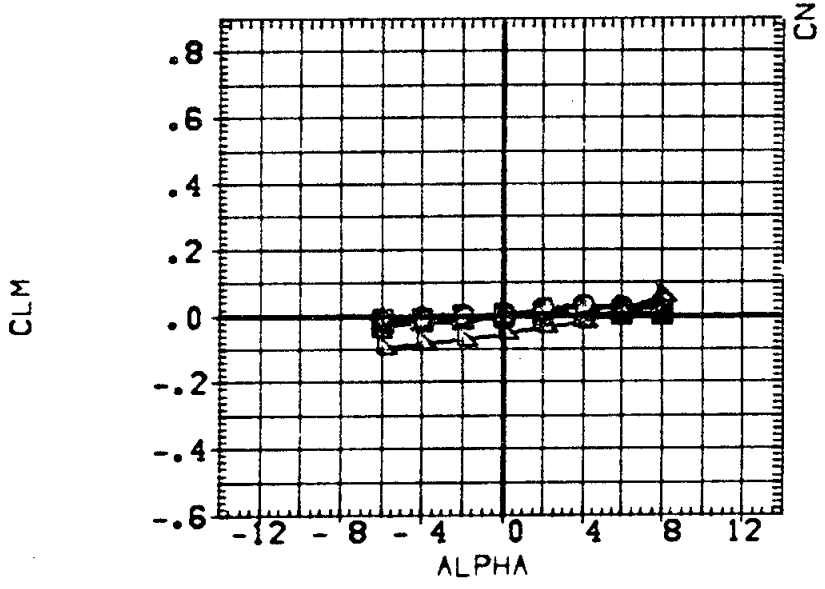
DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)	○	MSFC 545 (1A1)	TANK ON ORBITER
(R72B01)	△	MSFC 545 (1A1)	ORBITER ON TANK
(R72C02)	□	MSFC 545 (1A1)	SRB ON TANK
(R72D04)	◇	MSFC 545 (1A1)	TANK ON SRB
(R72E02)	▽	MSFC 545 (1A1)	SRB ON ORBITER
(R72F06)	▷	MSFC 545 (1A1)	ORBITER ON SRB

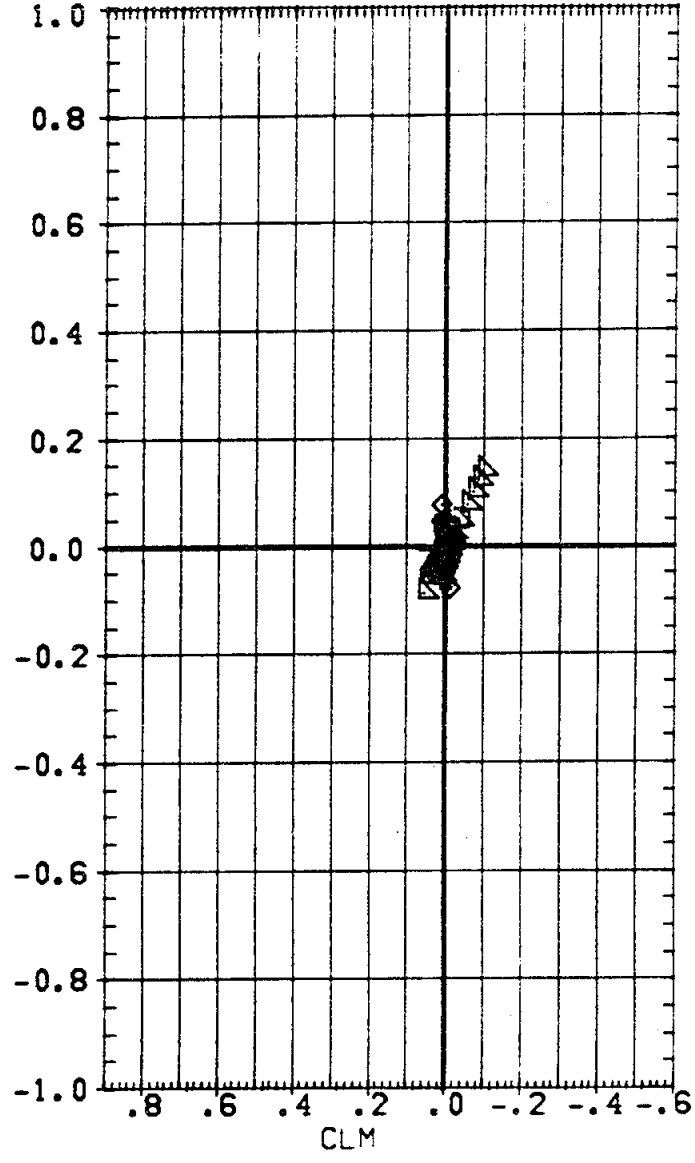
ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

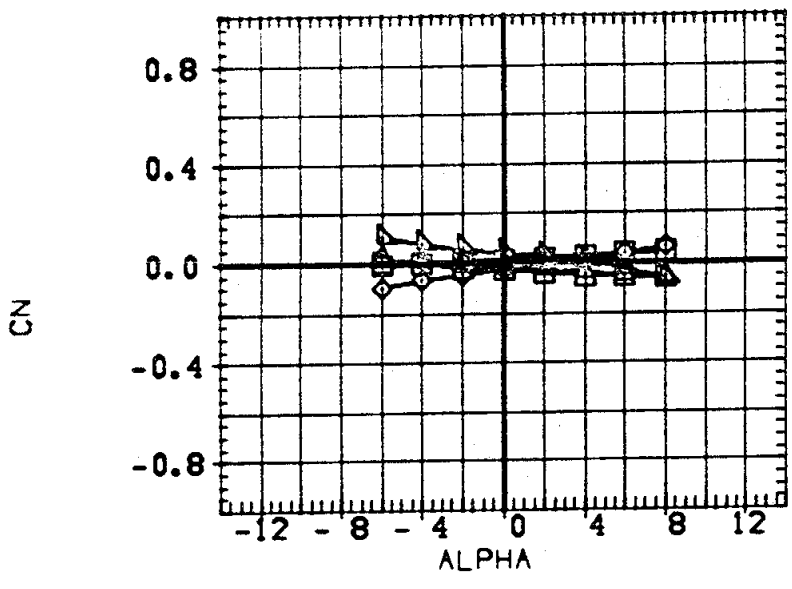
(D)MACH = 1.20

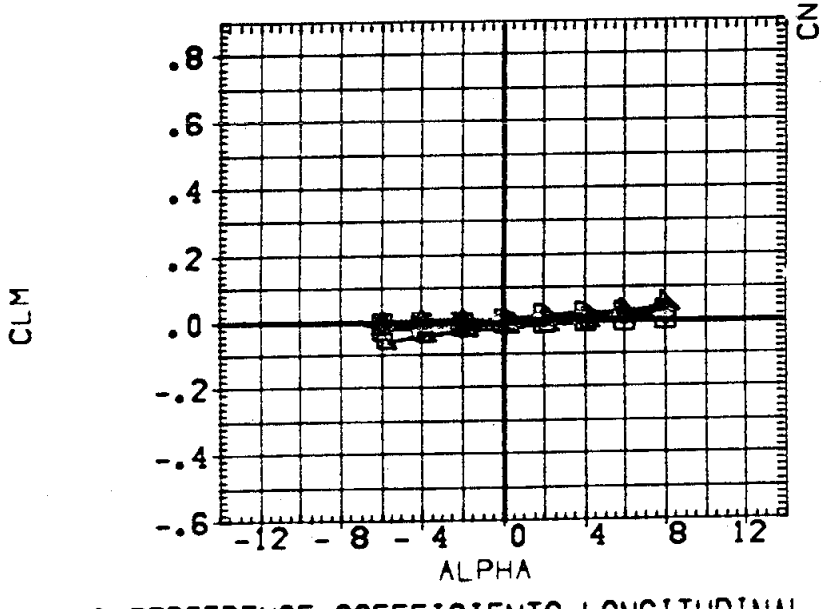
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		
(R72A01)		DATA NOT AVAILABLE		
(R72B01)		MSFC 545 (IA1)	ORBITER ON TANK	
(R72C02)		MSFC 545 (IA1)	SRB ON TANK	
(R72D04)		MSFC 545 (IA1)	TANK ON SRB	
(R72E02)		MSFC 545 (IA1)	SRB ON ORBITER	
(R72F06)		MSFC 545 (IA1)	ORBITER ON SRB	

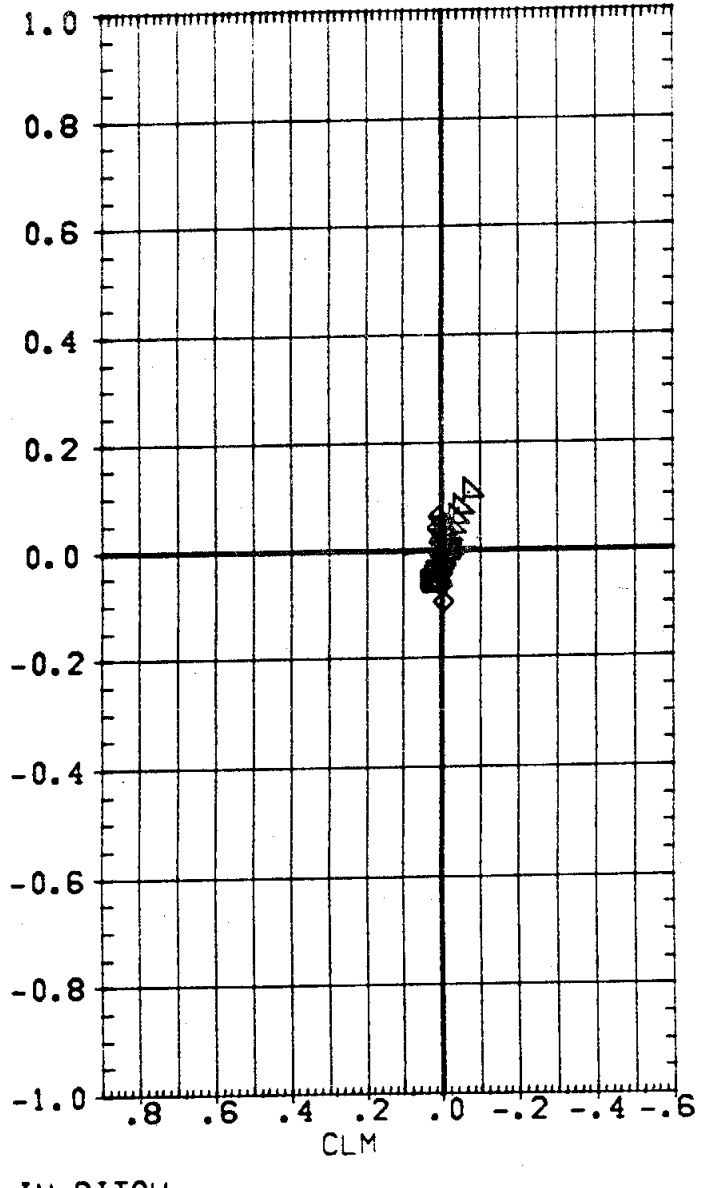
ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

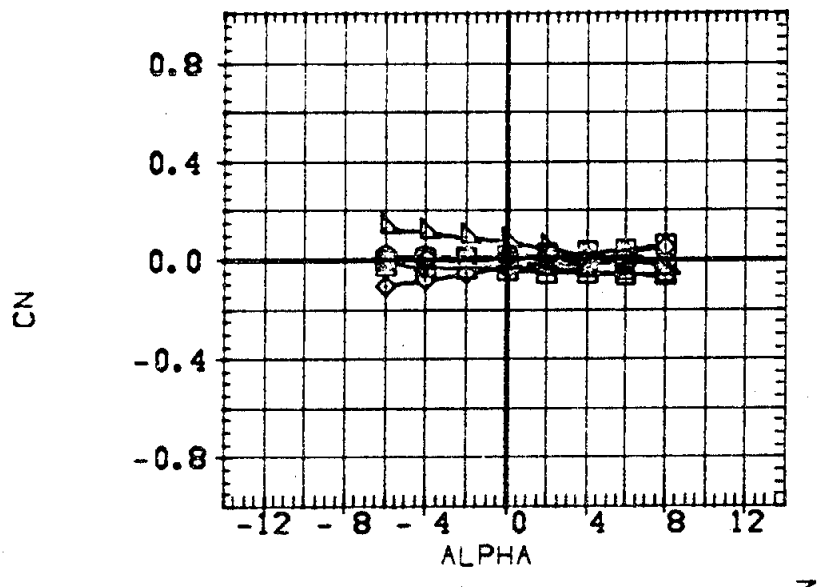
(E)MACH = 1.46

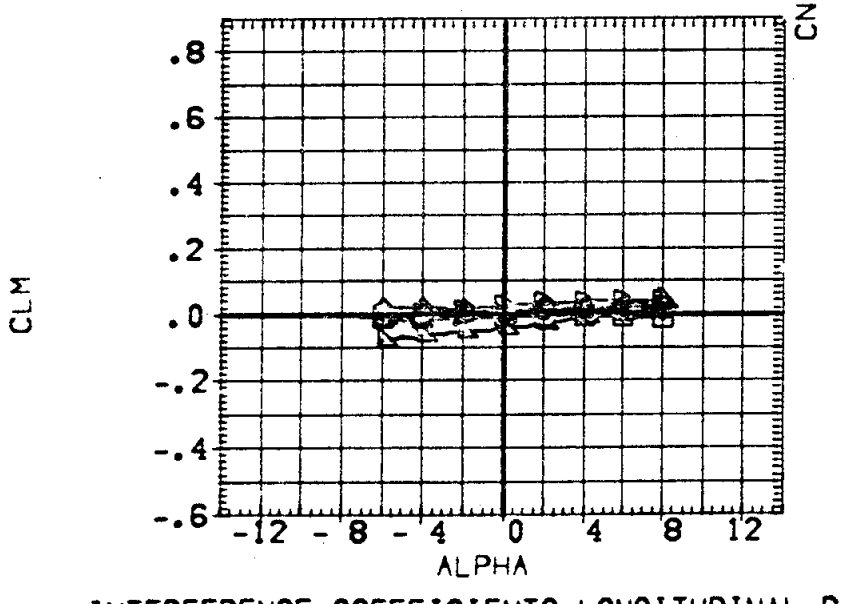
DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)		MSFC 545 (1A1)	TANK ON ORBITER
(R72B01)		MSFC 545 (1A1)	ORBITER ON TANK
(R72C02)		MSFC 545 (1A1)	SRB ON TANK
(R72D04)		MSFC 545 (1A1)	TANK ON SRB
(R72E02)		MSFC 545 (1A1)	SRB ON ORBITER
(R72F06)		MSFC 545 (1A1)	ORBITER ON SRB

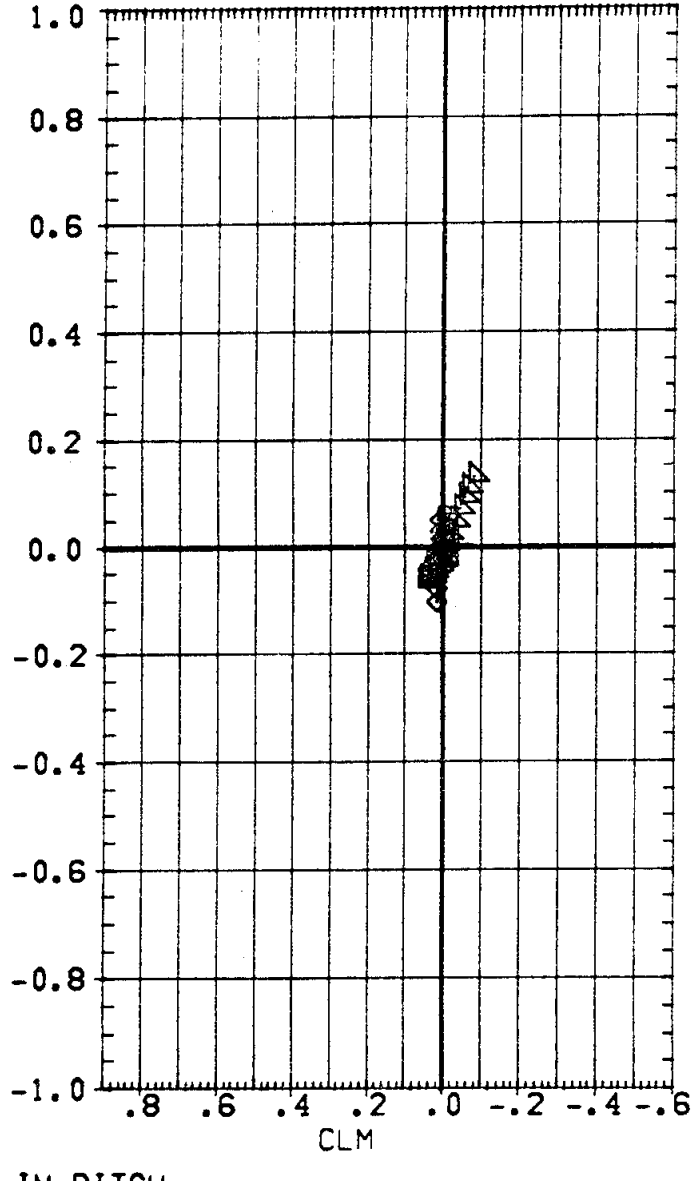
ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

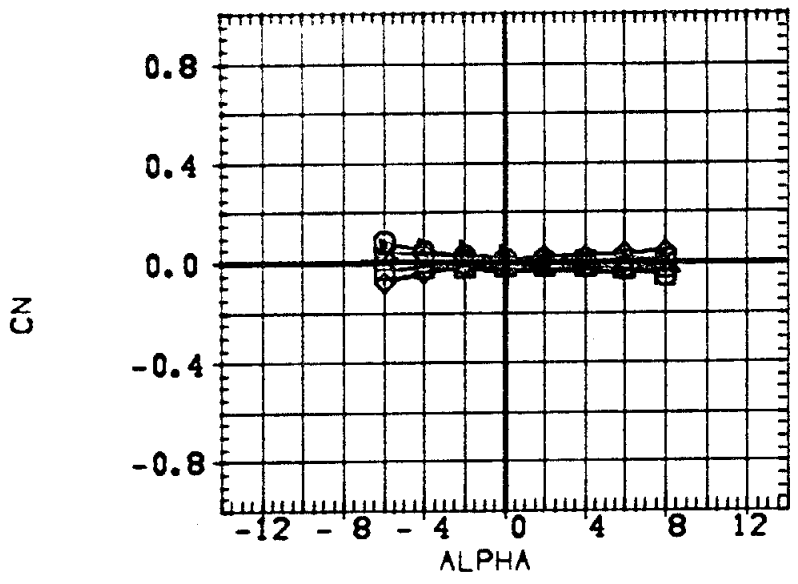
(F)MACH = 1.96

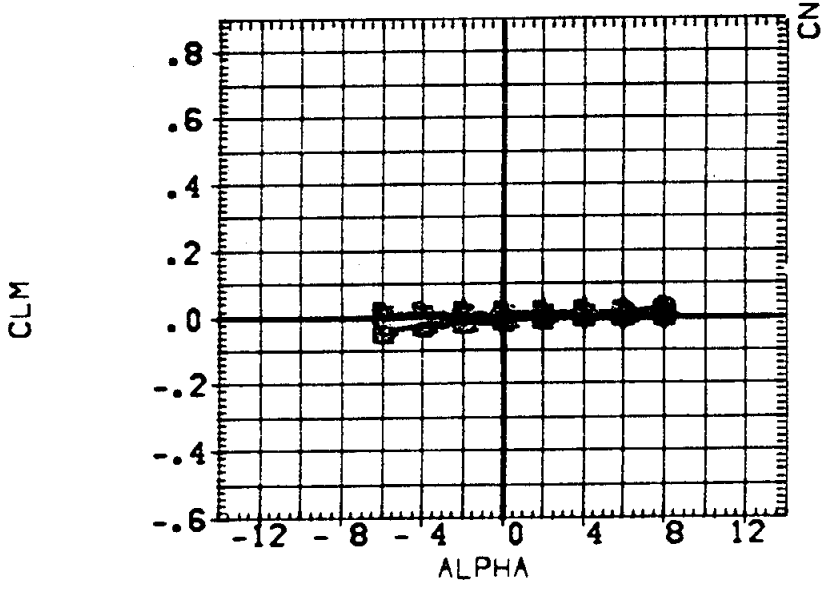
DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)		MSFC 545 (IA1)	TANK ON ORBITER
(R72B01)		MSFC 545 (IA1)	ORBITER ON TANK
(R72C02)		MSFC 545 (IA1)	SRB ON TANK
(R72D04)		MSFC 545 (IA1)	TANK ON SRB
(R72E02)		MSFC 545 (IA1)	SRB ON ORBITER
(R72F06)		MSFC 545 (IA1)	ORBITER ON SRB

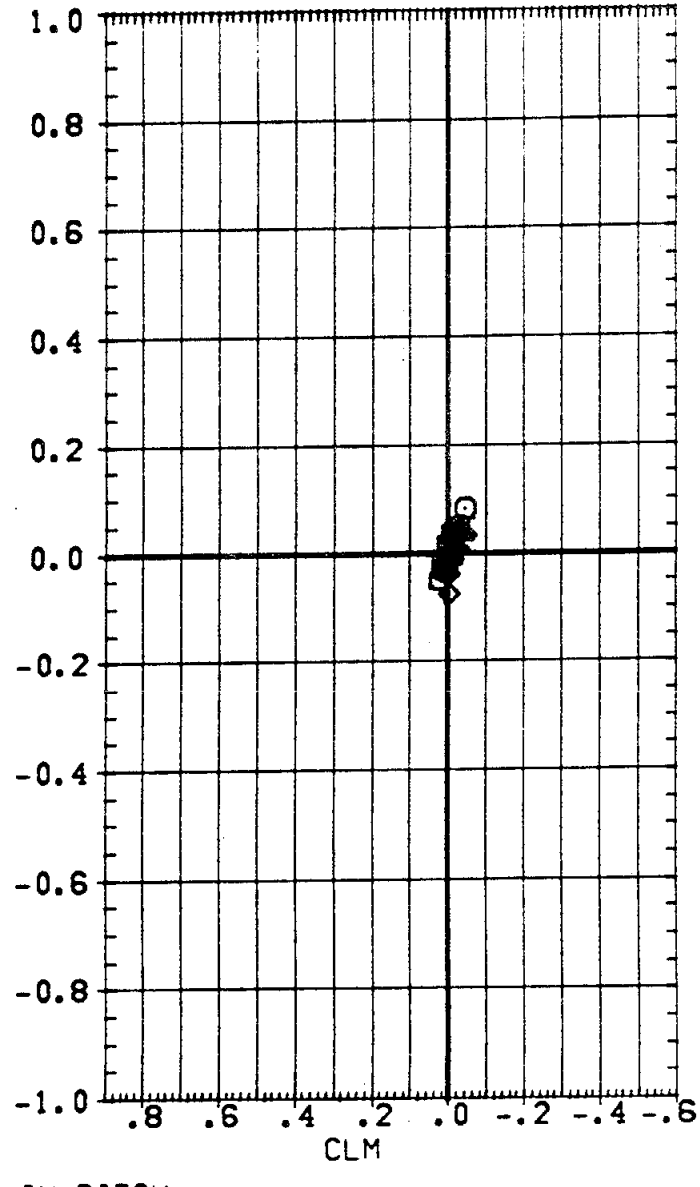
ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1326.0	IN.
BREF	1326.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT







INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

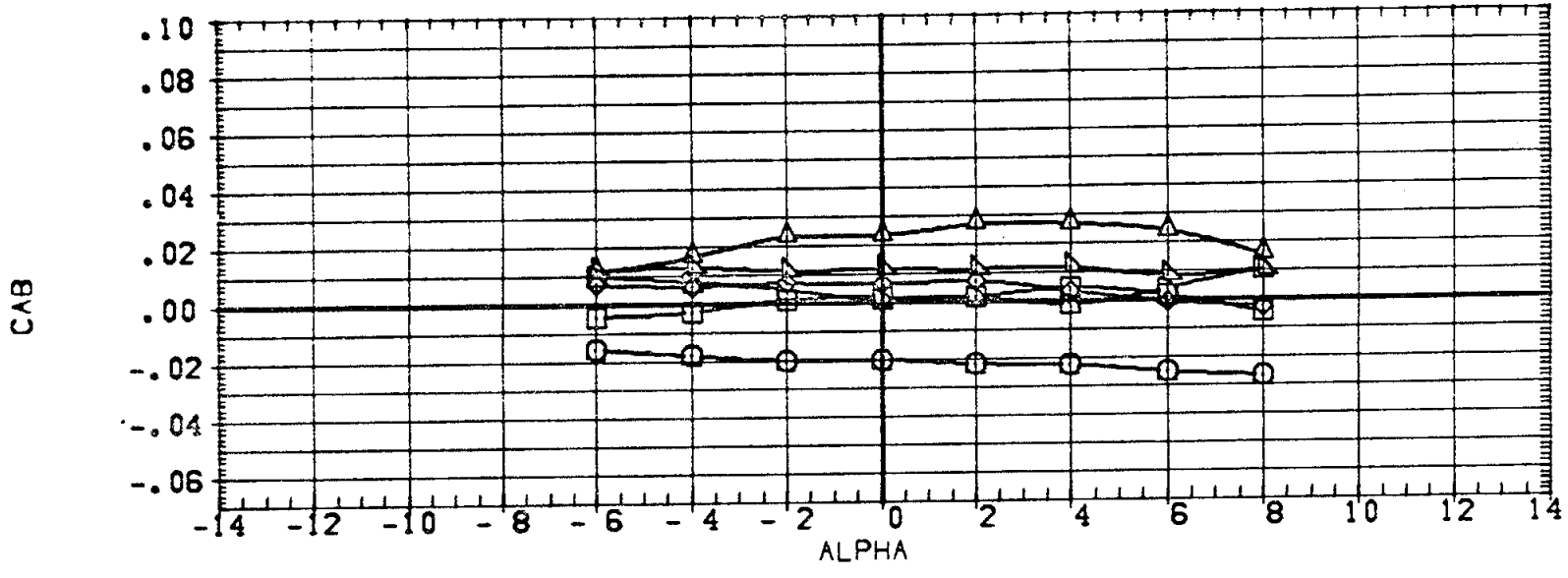
(G)MACH = 4.96

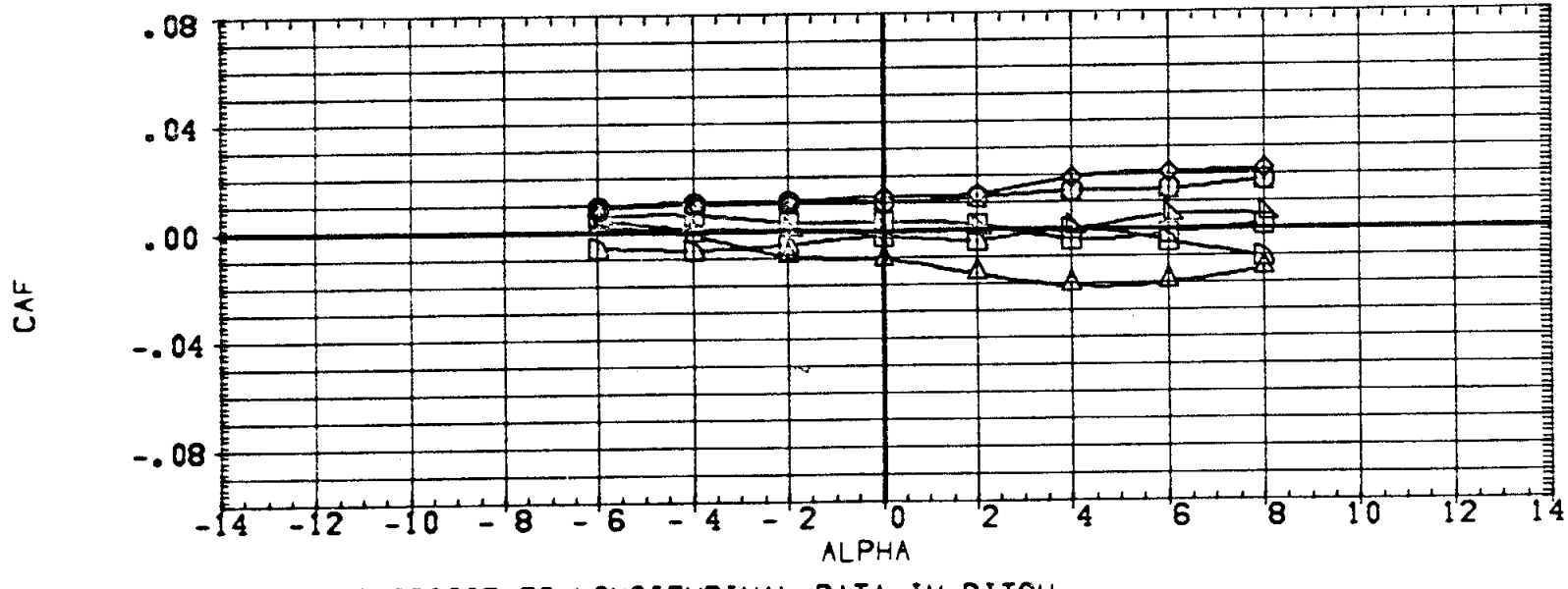
DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)		MSFC 545 (IA1)	TANK ON ORBITER
(R72B01)		MSFC 545 (IA1)	ORBITER ON TANK
(R72C02)		MSFC 545 (IA1)	SRB ON TANK
(R72D04)		MSFC 545 (IA1)	TANK ON SRB
(R72E02)		MSFC 545 (IA1)	SRB ON ORBITER
(R72F06)		MSFC 545 (IA1)	ORBITER ON SRB

ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





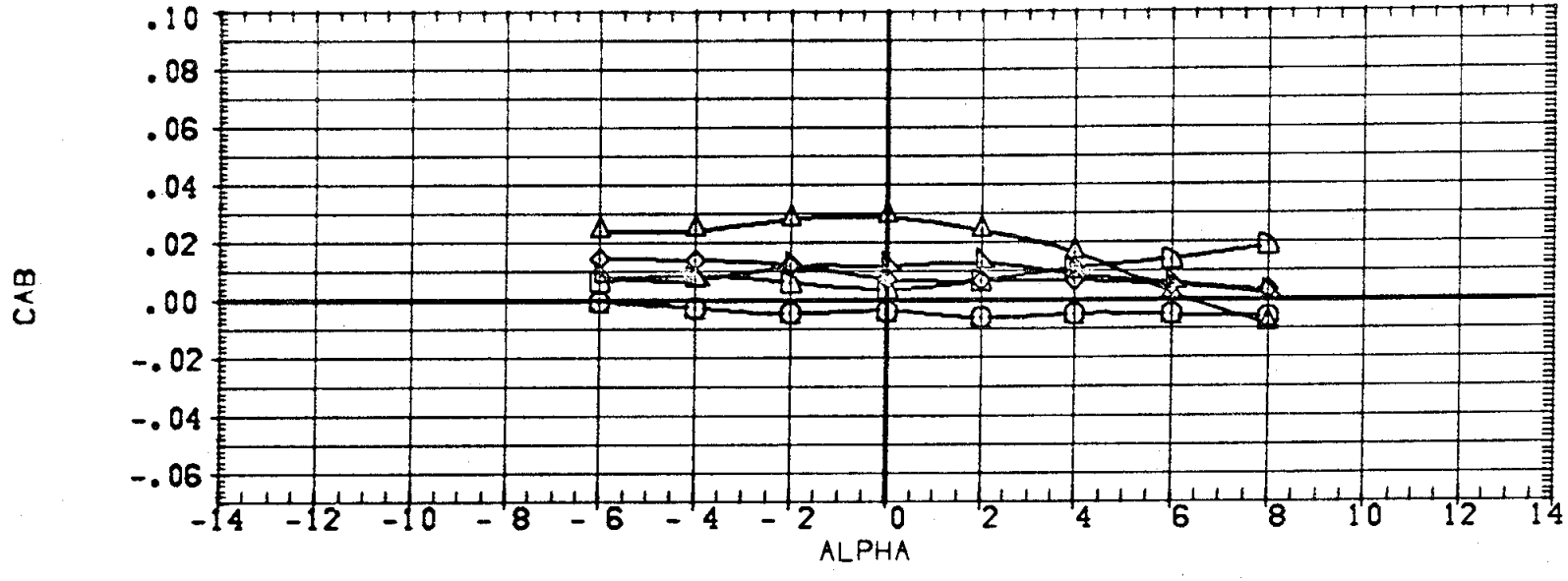
INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

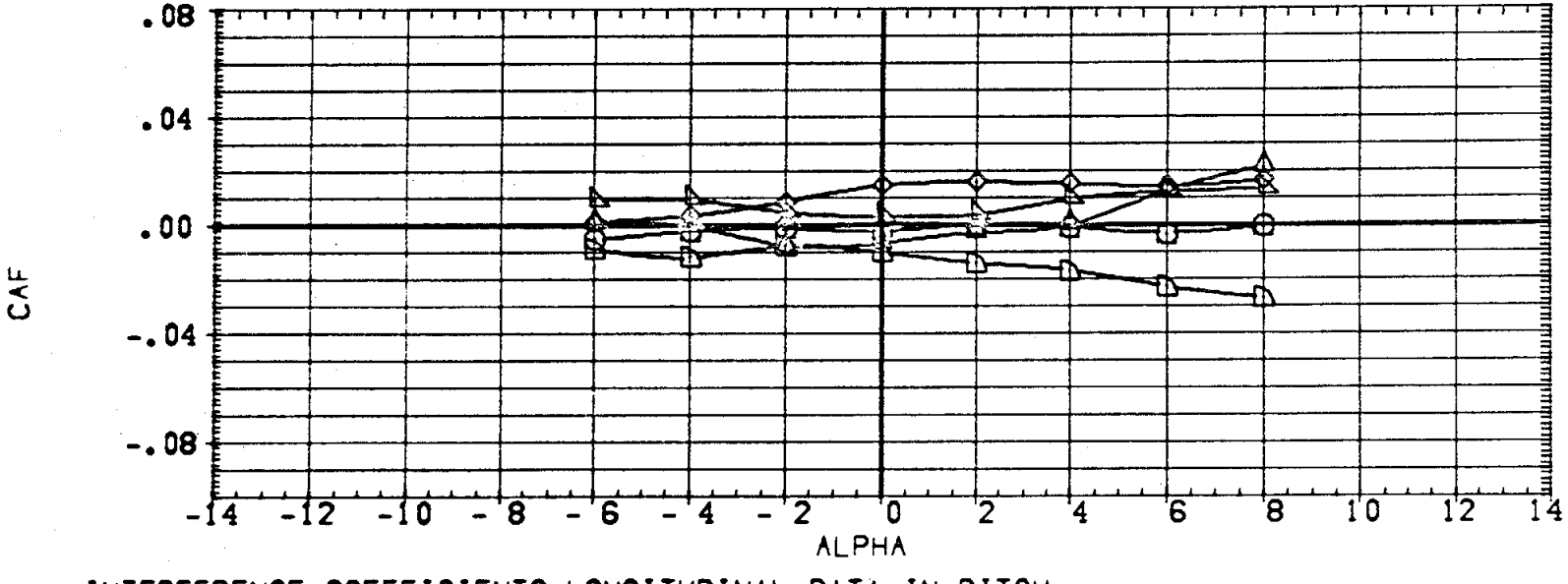
(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72A01)		MSFC 545 (IA1) TANK ON ORBITER			10.000
(R72B01)		MSFC 545 (IA1) ORBITER ON TANK			
(R72C02)		MSFC 545 (IA1) SRB ON TANK	0.000	0.120	10.000
(R72D04)		DATA NOT AVAILABLE			
(R72E02)		MSFC 545 (IA1) SRB ON ORBITER	0.000	0.120	10.000
(R72F06)		MSFC 545 (IA1) ORBITER ON SRB			

REFERENCE INFORMAT

SREF	5220.0	SQ.. T.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





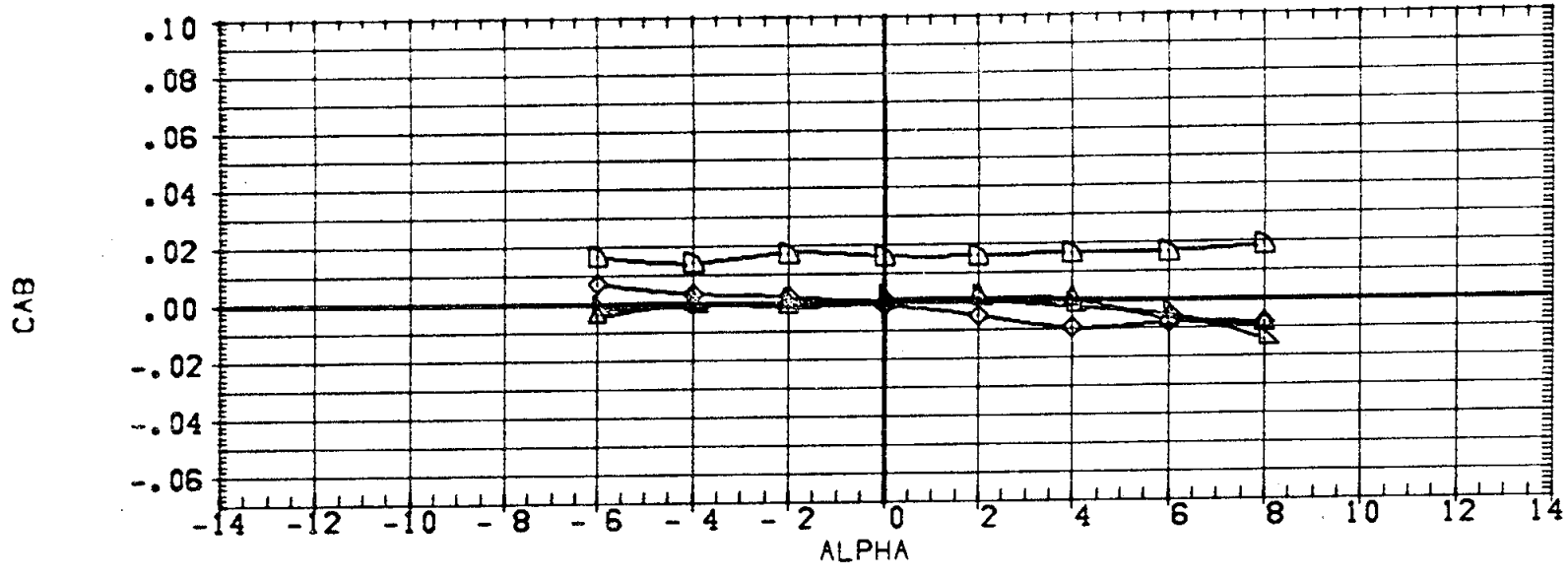
INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

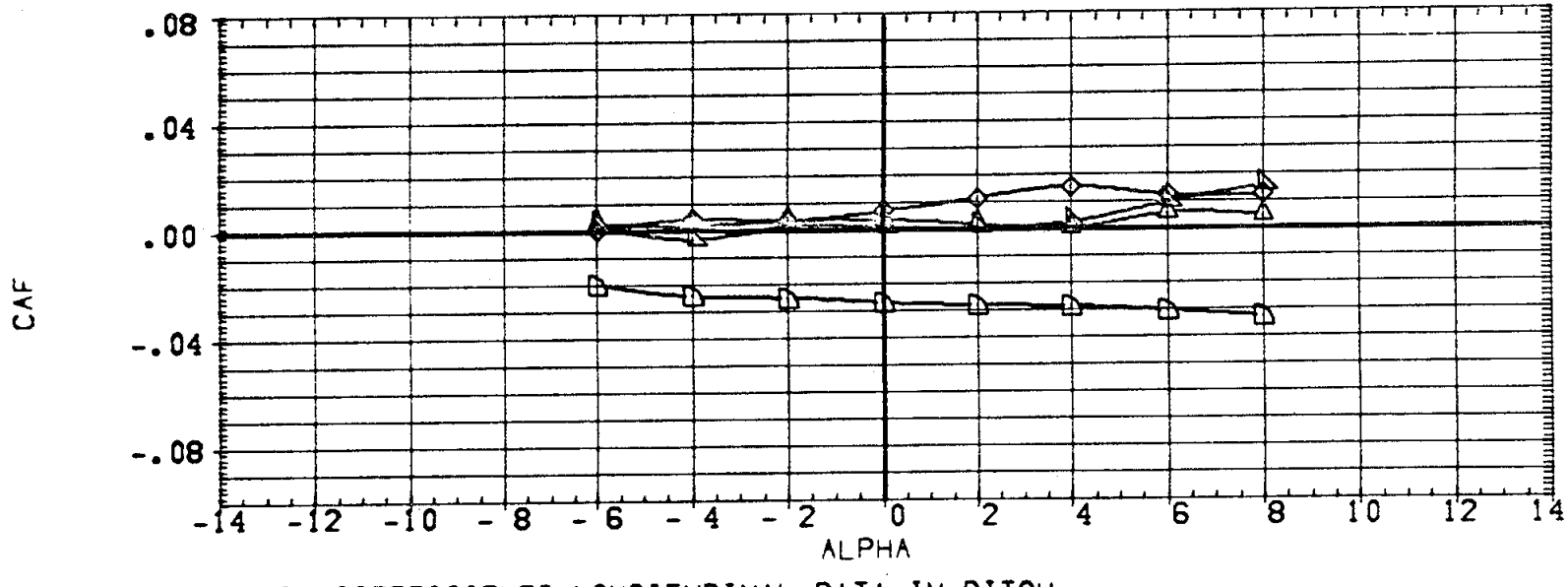
(B)MACH = 0.90

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72A01)		DATA NOT AVAILABLE			10.000
(R72B01)		MSFC 545 (IA1) ORBITER ON TANK			
(R72C02)		MSFC 545 (IA1) SRB ON TANK	0.000	0.120	10.000
(R72D04)		DATA NOT AVAILABLE			
(R72E02)		MSFC 545 (IA1) SRB ON ORBITER	0.000	0.120	10.000
(R72F06)		MSFC 545 (IA1) ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

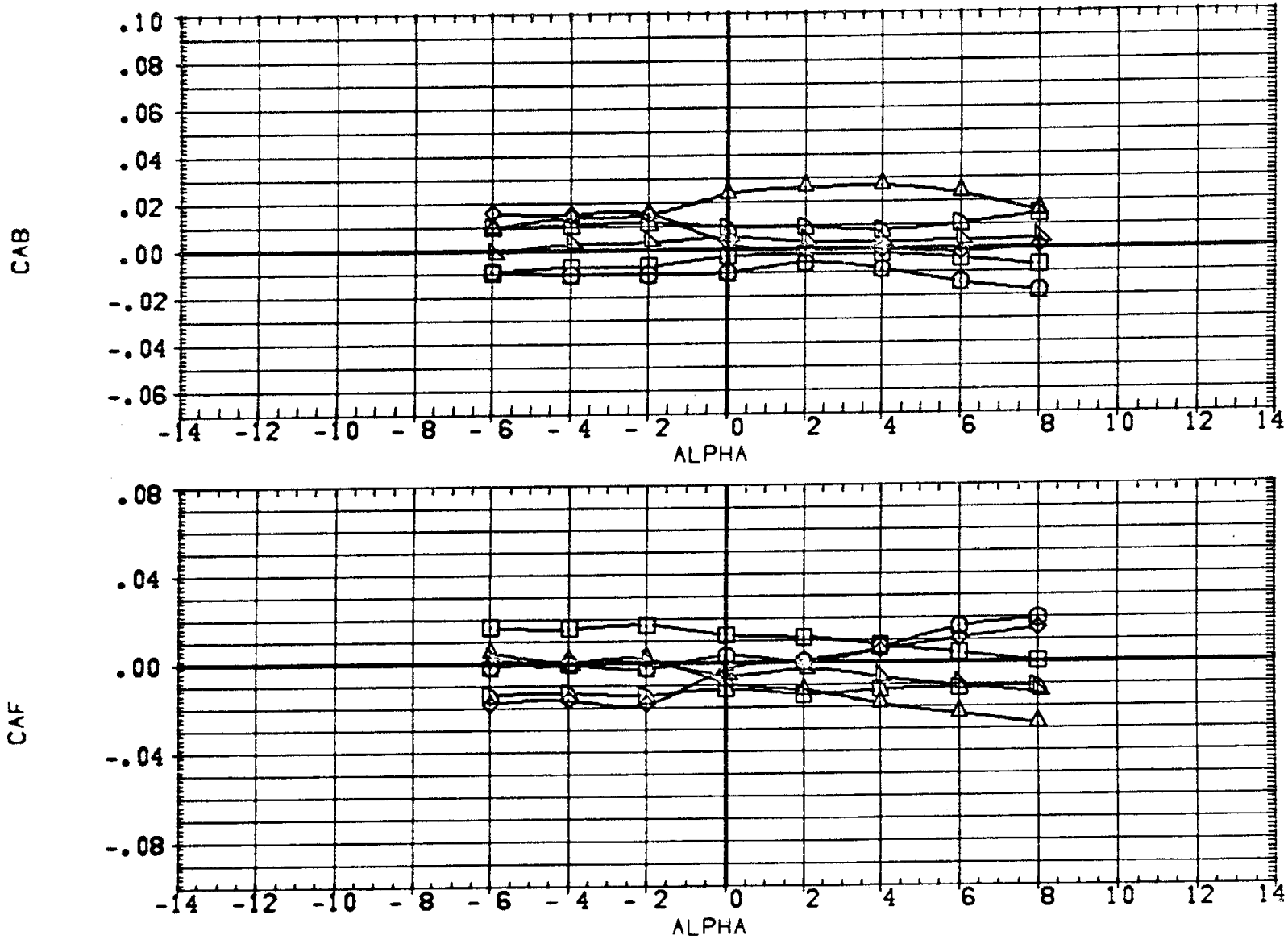
(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)	□	MSFC 545 (IA1)	TANK ON ORBITER
(R72B01)	△	MSFC 545 (IA1)	ORBITER ON TANK
(R72C02)	◇	MSFC 545 (IA1)	SRB ON TANK
(R72D04)	⊿	MSFC 545 (IA1)	TANK ON SRB
(R72E02)	⊽	MSFC 545 (IA1)	SRB ON ORBITER
(R72F06)	▽	MSFC 545 (IA1)	ORBITER ON SRB

ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

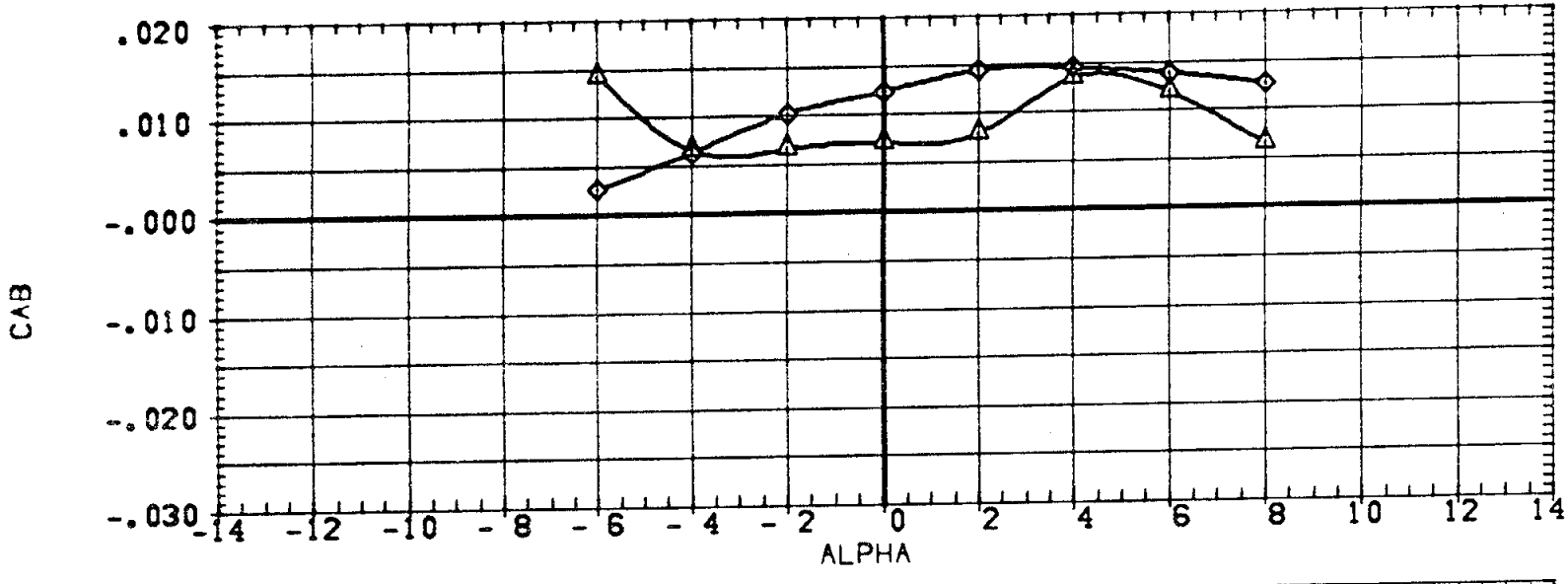
(D)MACH = 1.20

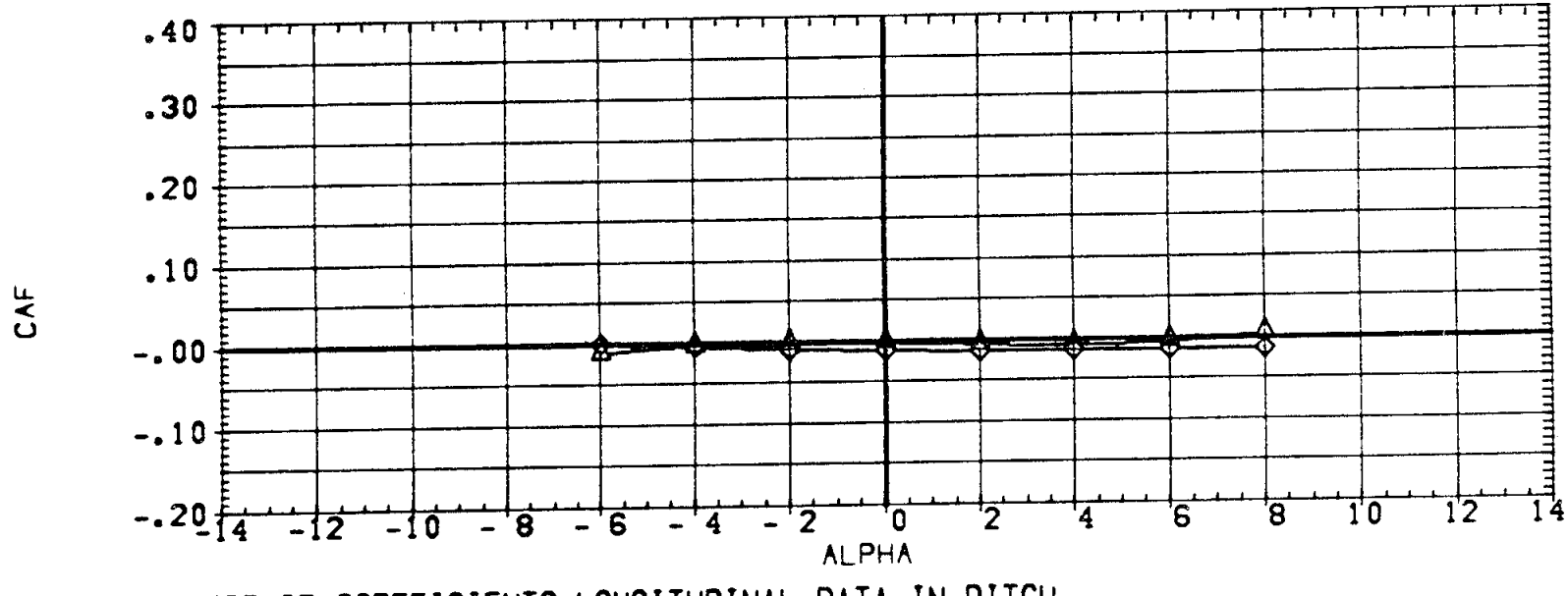
DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(RY2A01)	○	DATA NOT AVAILABLE
(RY2C02)	△	MSFC 545 (1A1) SRB ON TANK
(RY2E02)	◇	MSFC 545 (1A1) SRB ON ORBITER

ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

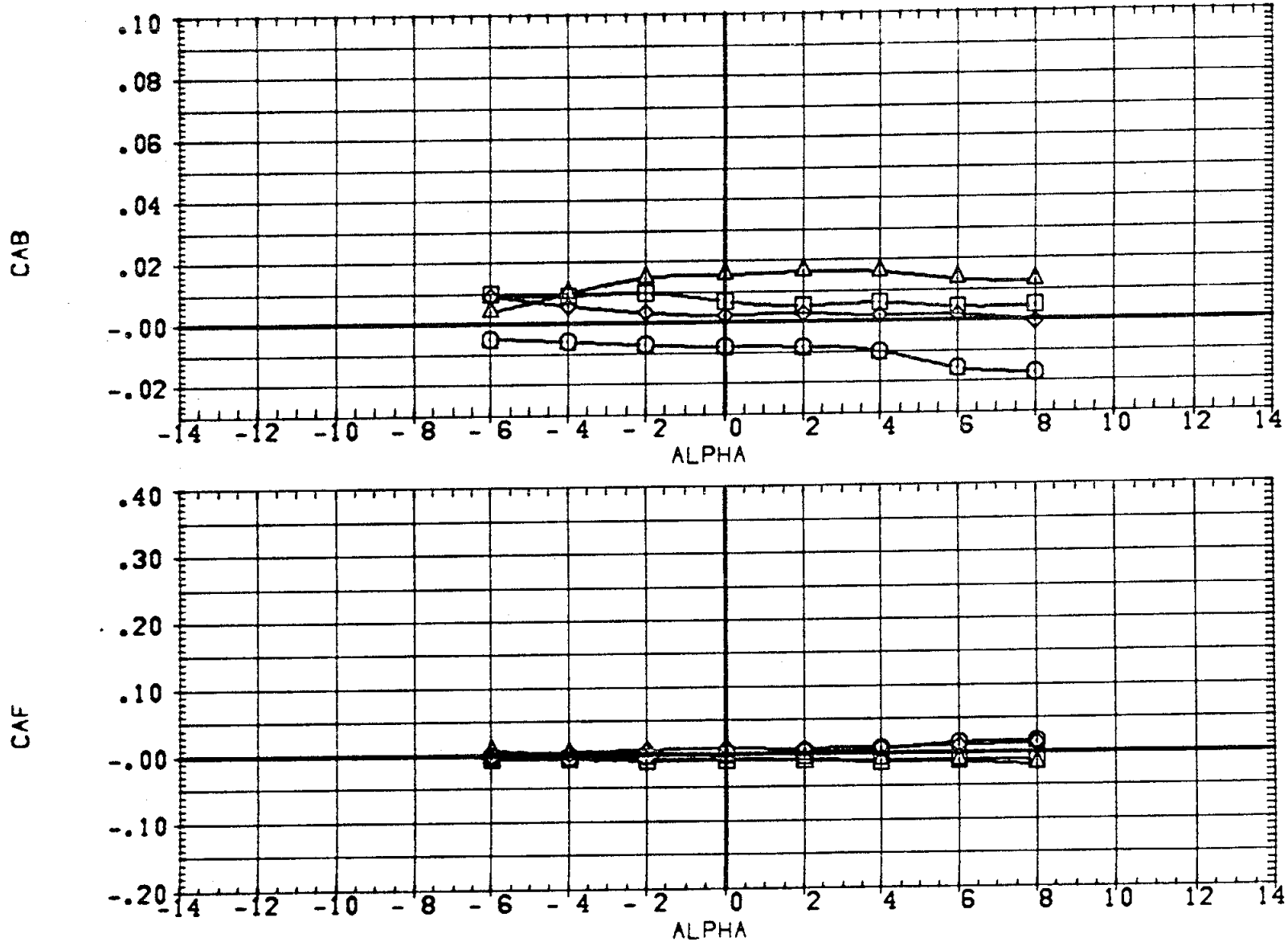
(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)	○	MSFC 545 (1A1)	TANK ON ORBITER
(R72B01)	▽	MSFC 545 (1A1)	ORBITER ON TANK
(R72C02)	◇	MSFC 545 (1A1)	SRB ON TANK
(R72E02)	□	MSFC 545 (1A1)	SRB ON ORBITER

ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

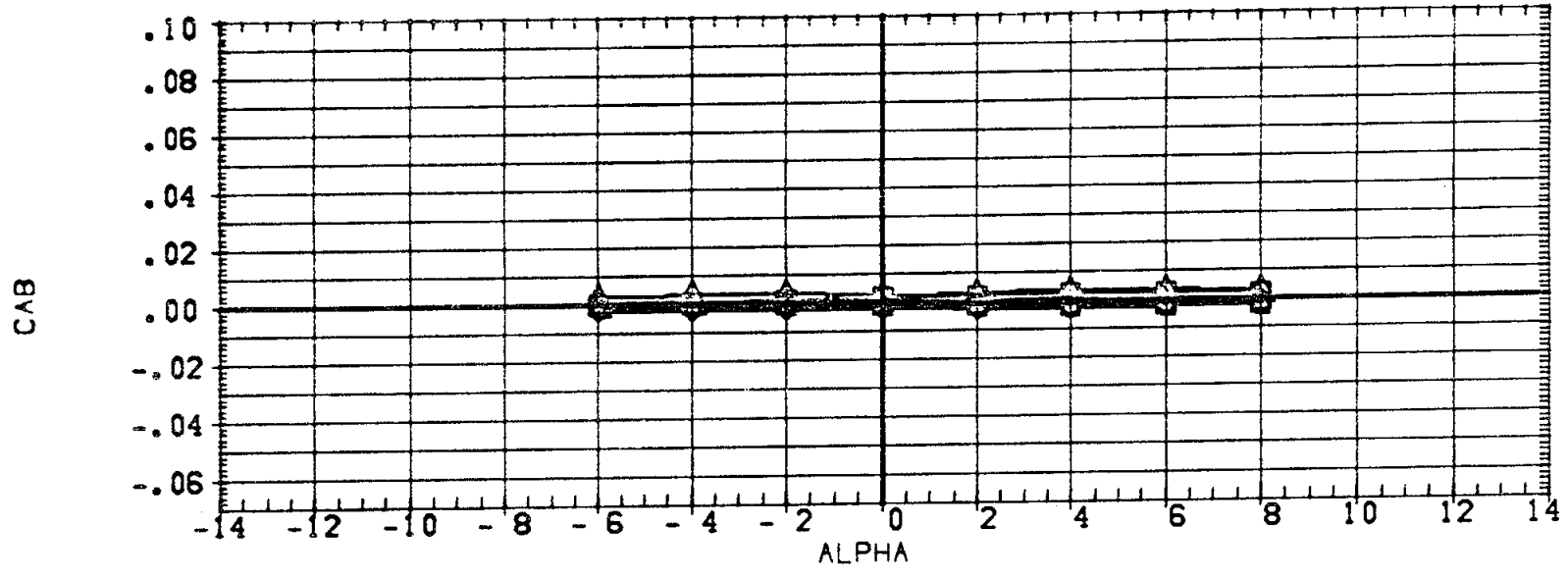
(F)MACH = 1.96

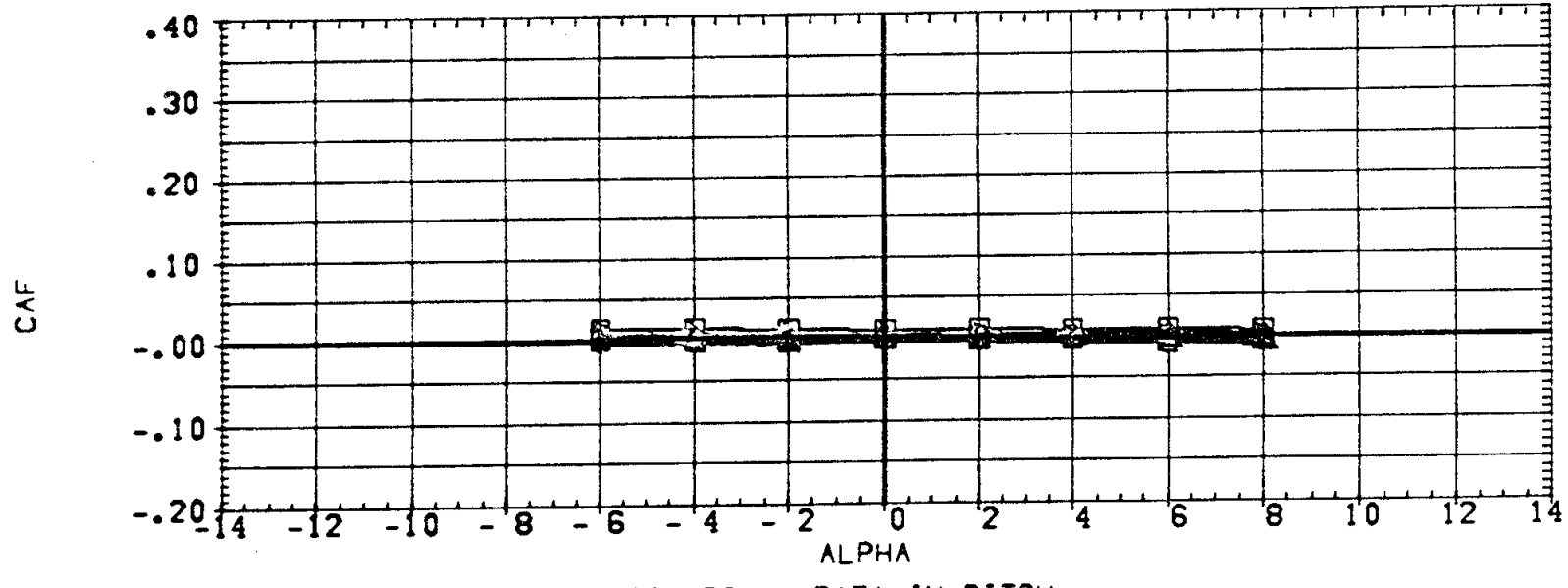
DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)		MSFC 545 (IA1)	TANK ON ORBITER
(R72B01)		MSFC 545 (IA1)	ORBITER ON TANK
(R72C02)		MSFC 545 (IA1)	SRB ON TANK
(R72D04)		MSFC 545 (IA1)	TANK ON SRB
(R72E02)		MSFC 545 (IA1)	SRB ON ORBITER
(R72F06)		MSFC 545 (IA1)	ORBITER ON SRB

ORBINC	DELTAZ	RUDFLR
		10.000
0.000	0.120	10.000
0.000	0.120	10.000

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





INTERFERENCE COEFFICIENTS LONGITUDINAL DATA IN PITCH

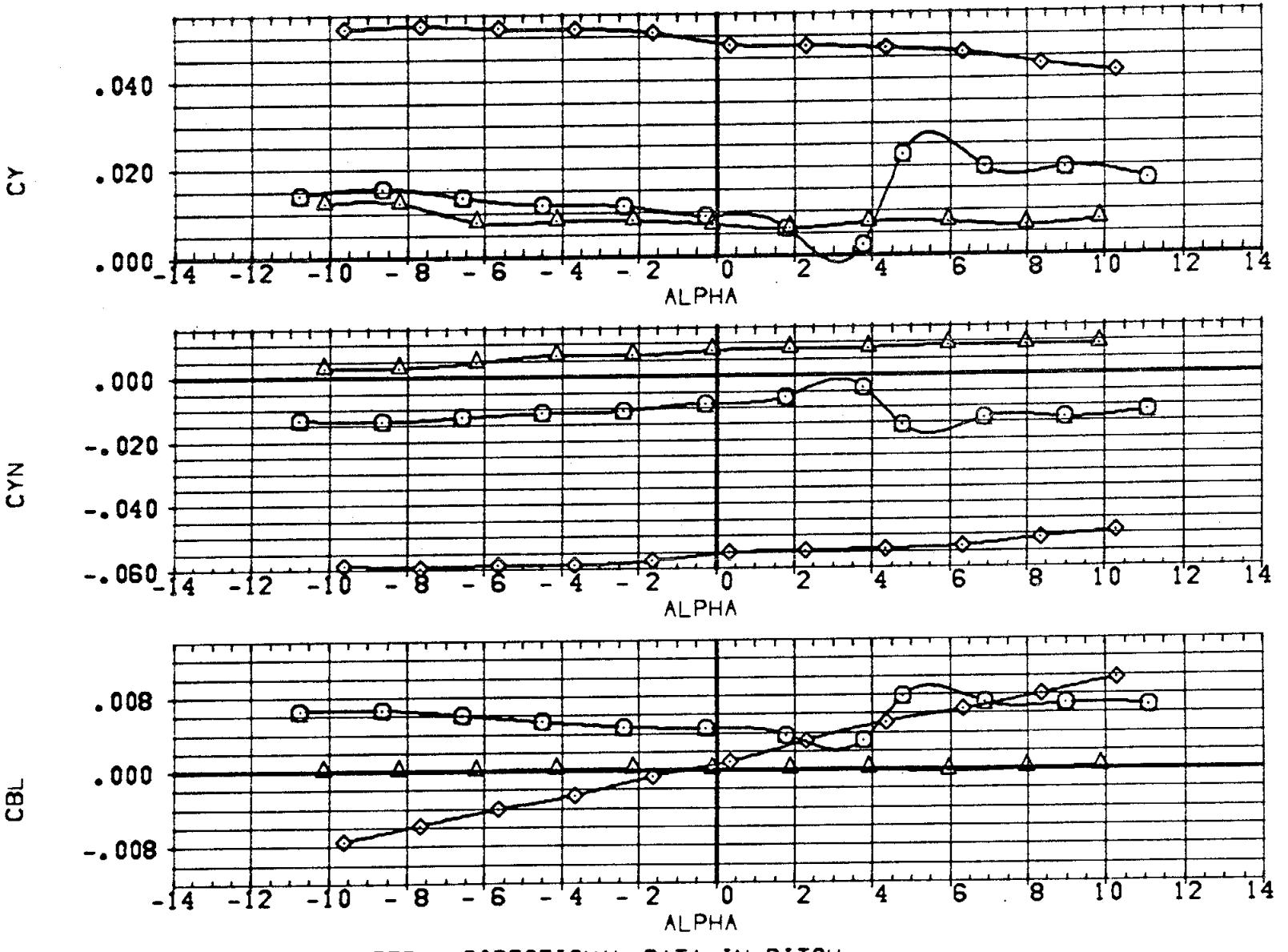
(G)MACH = 4.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



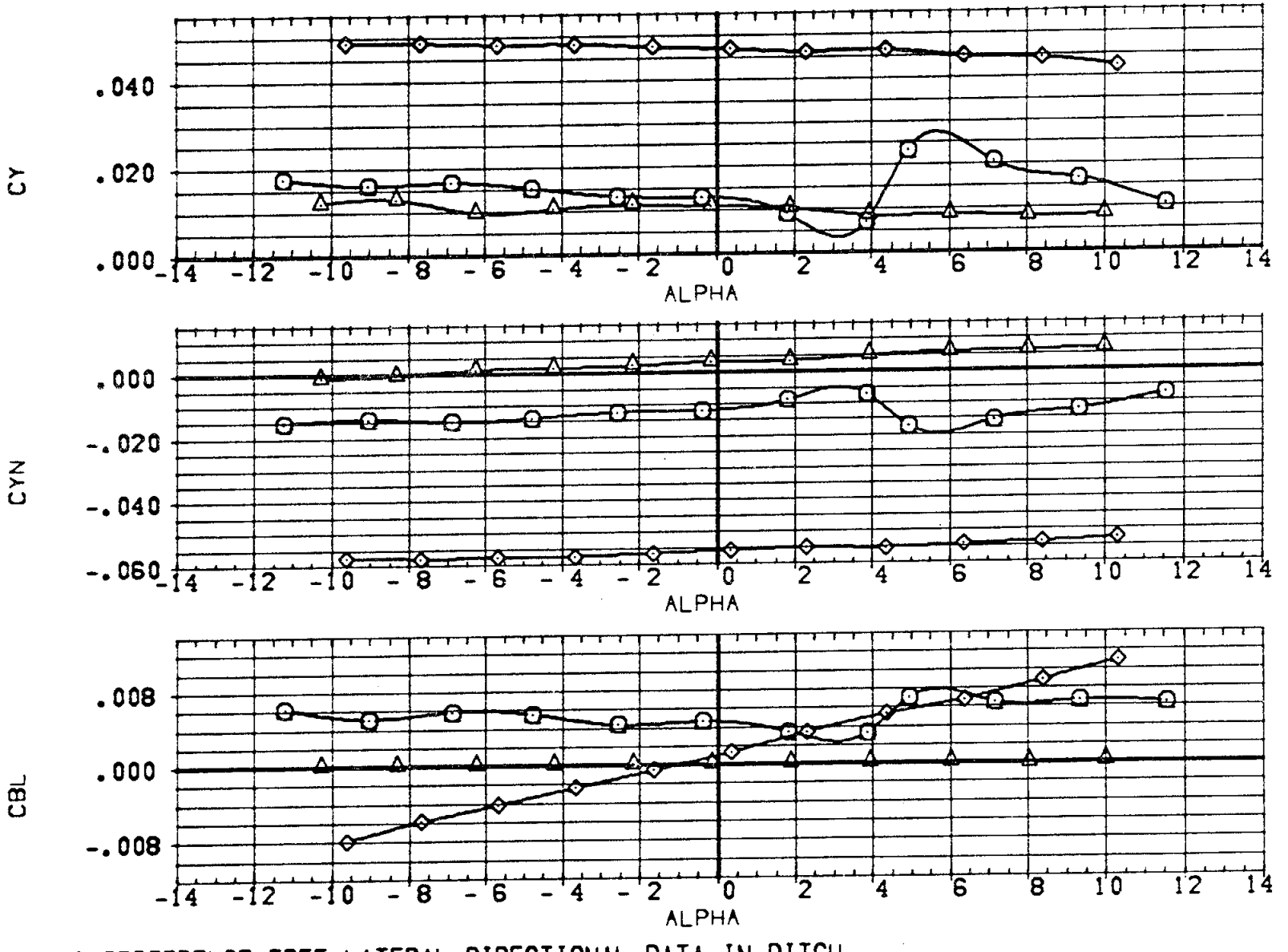
INTERFERENCE FREE LATERAL-DIRECTIONAL DATA IN PITCH

(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



INTERFERENCE FREE LATERAL-DIRECTIONAL DATA IN PITCH

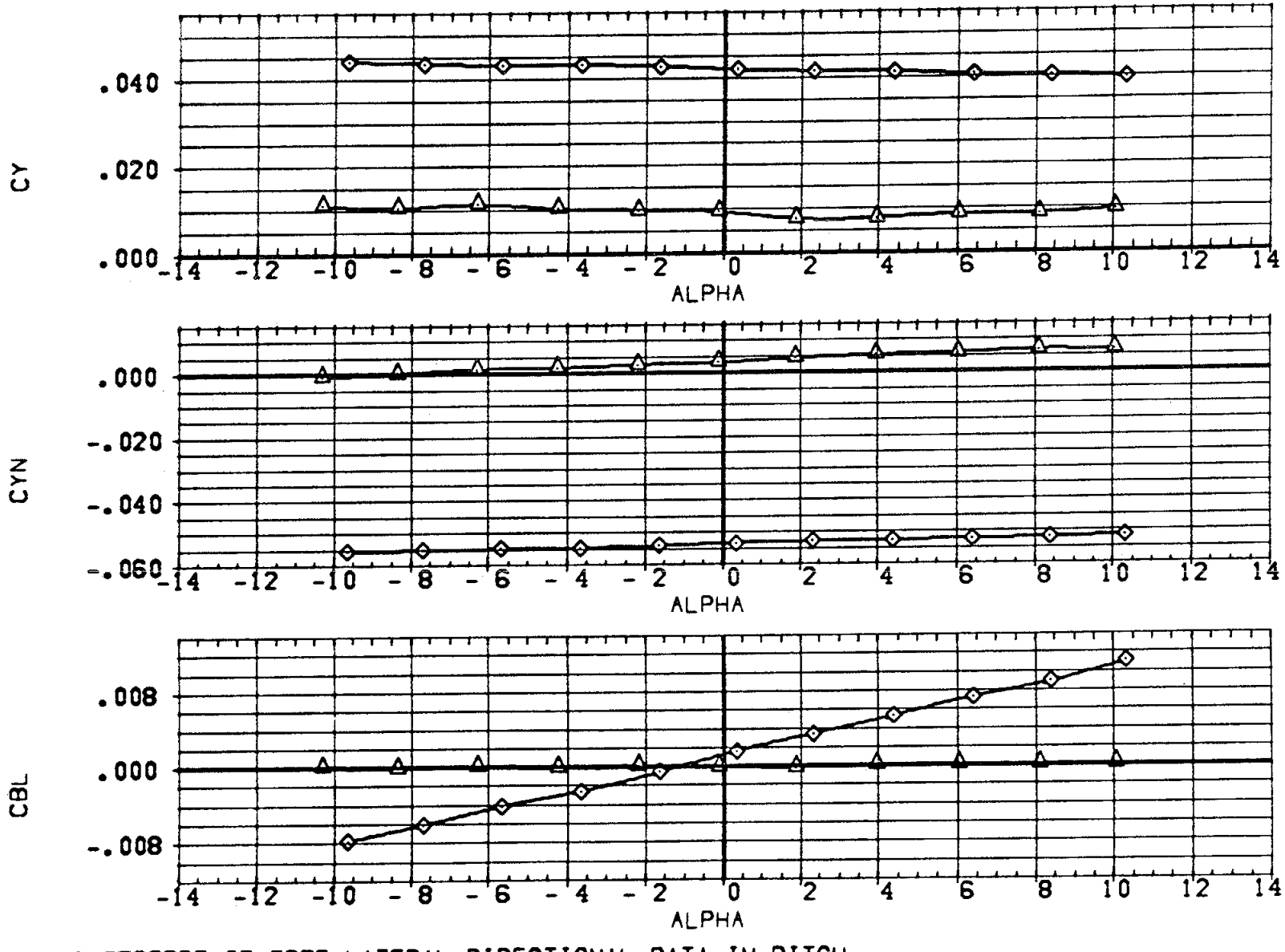
(B)MACH = 0.90

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A72501)	○	DATA NOT AVAILABLE
(A72601)	△	MSFC 545 (1A1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1326.0	IN.
BREF	1326.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



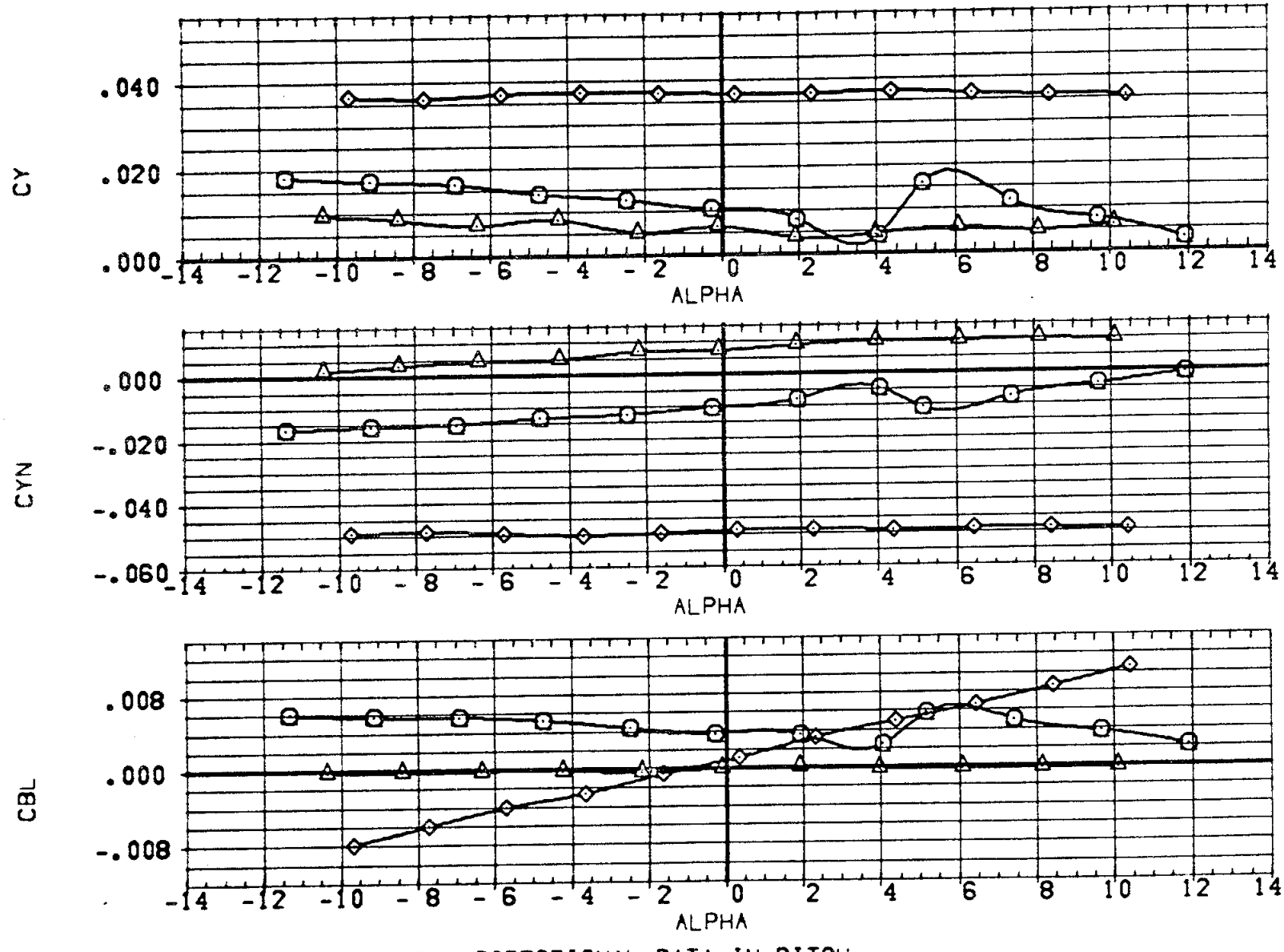
INTERFERENCE FREE LATERAL-DIRECTIONAL DATA IN PITCH

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	5220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



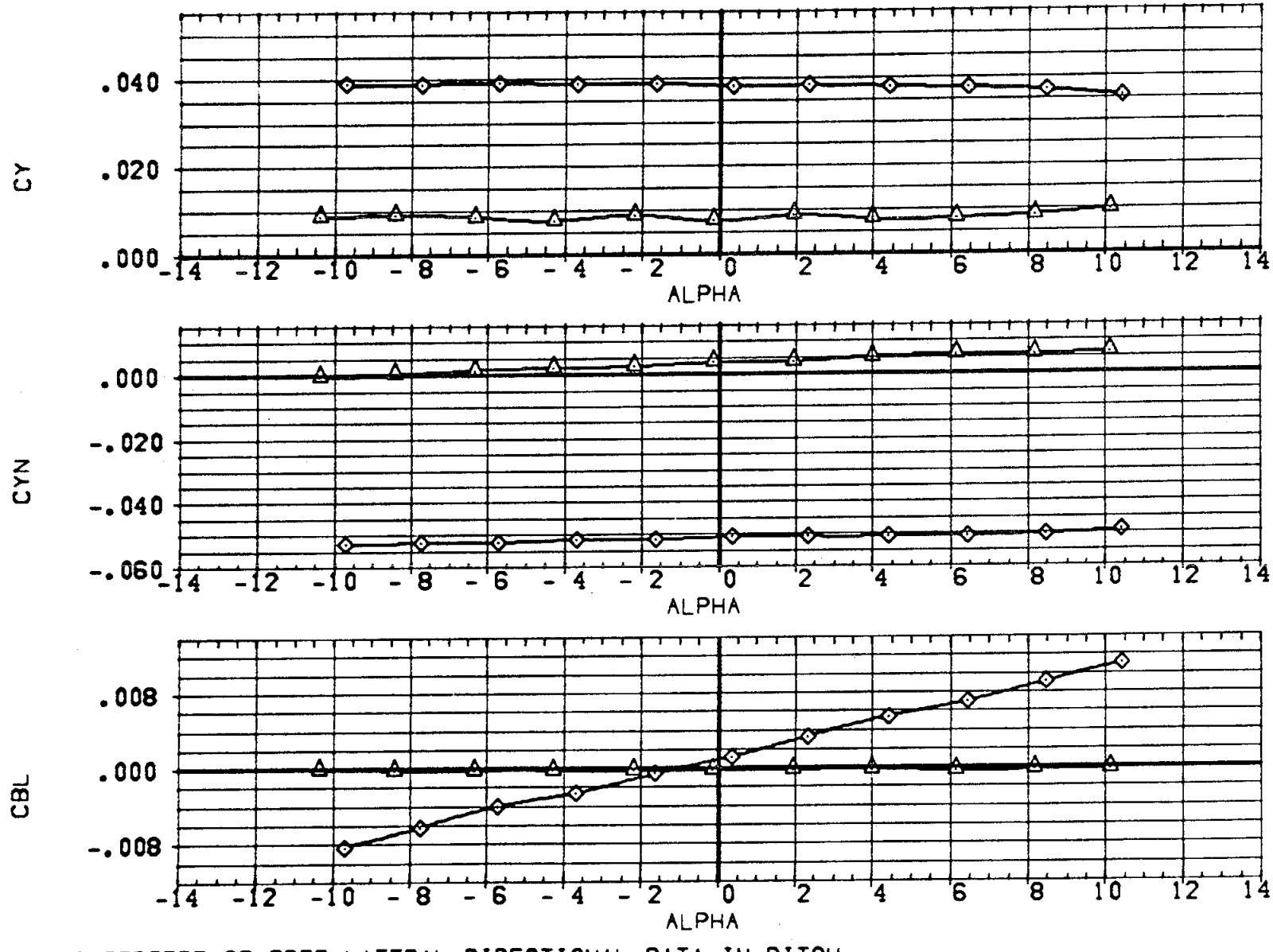
INTERFERENCE FREE LATERAL-DIRECTIONAL DATA IN PITCH

(D)MACH = 1.19

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72801)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



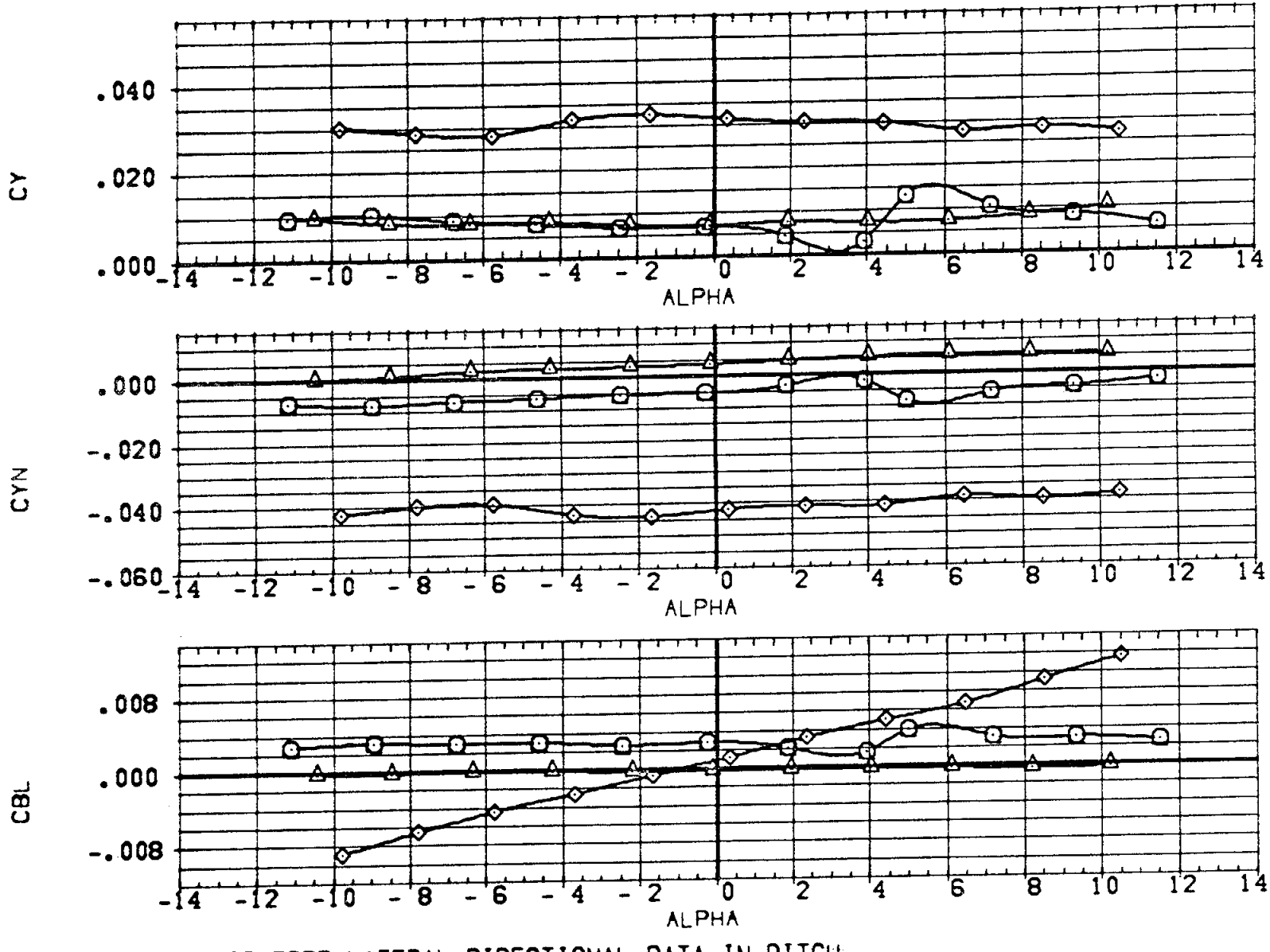
INTERFERENCE FREE LATERAL-DIRECTIONAL DATA IN PITCH

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72901)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72601)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



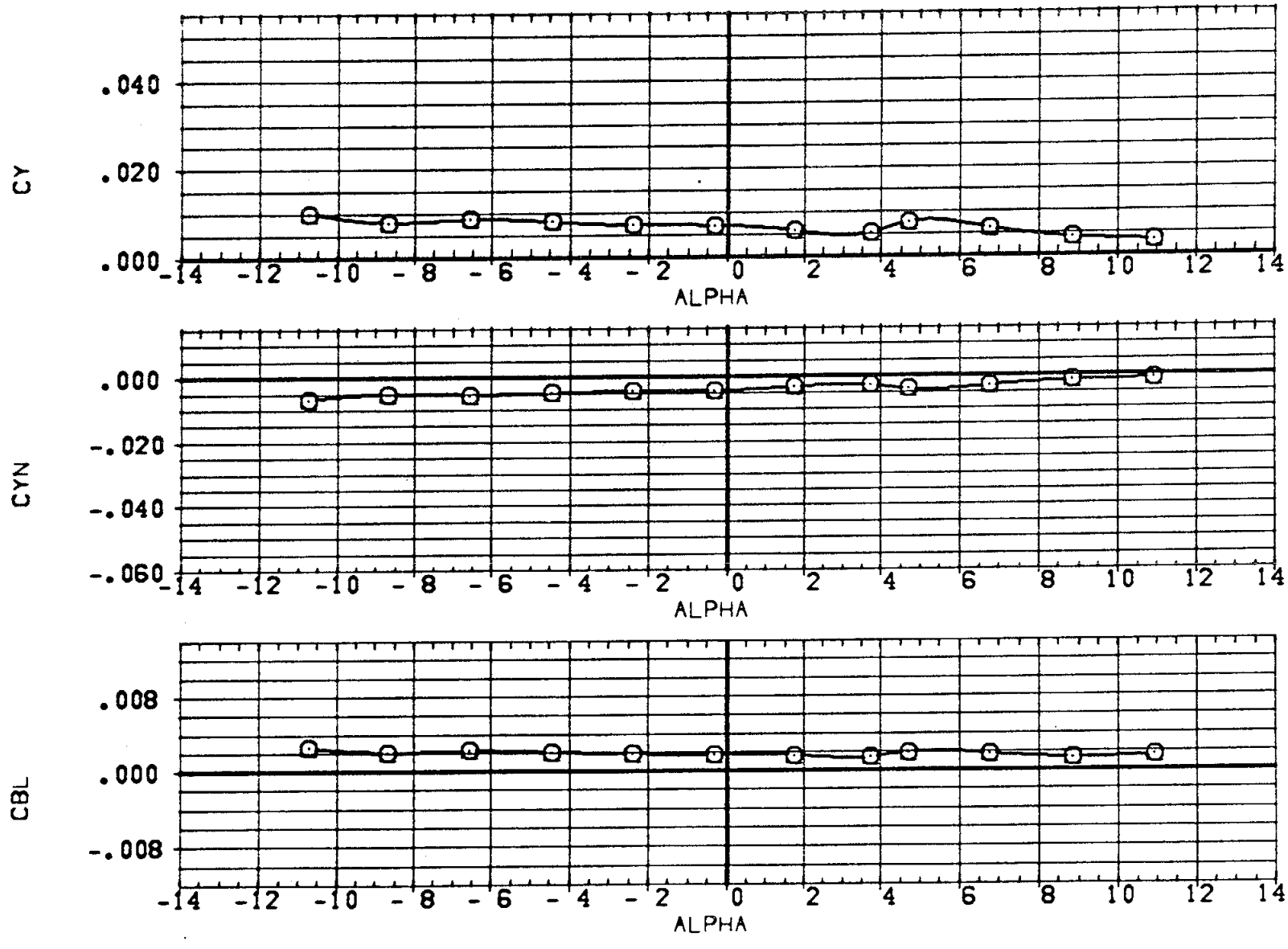
INTERFERENCE FREE LATERAL-DIRECTIONAL DATA IN PITCH

(F)MACH = 1.95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72501)	○	HSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72601)	△	DATA NOT AVAILABLE
(A72201)	◇	DATA NOT AVAILABLE

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



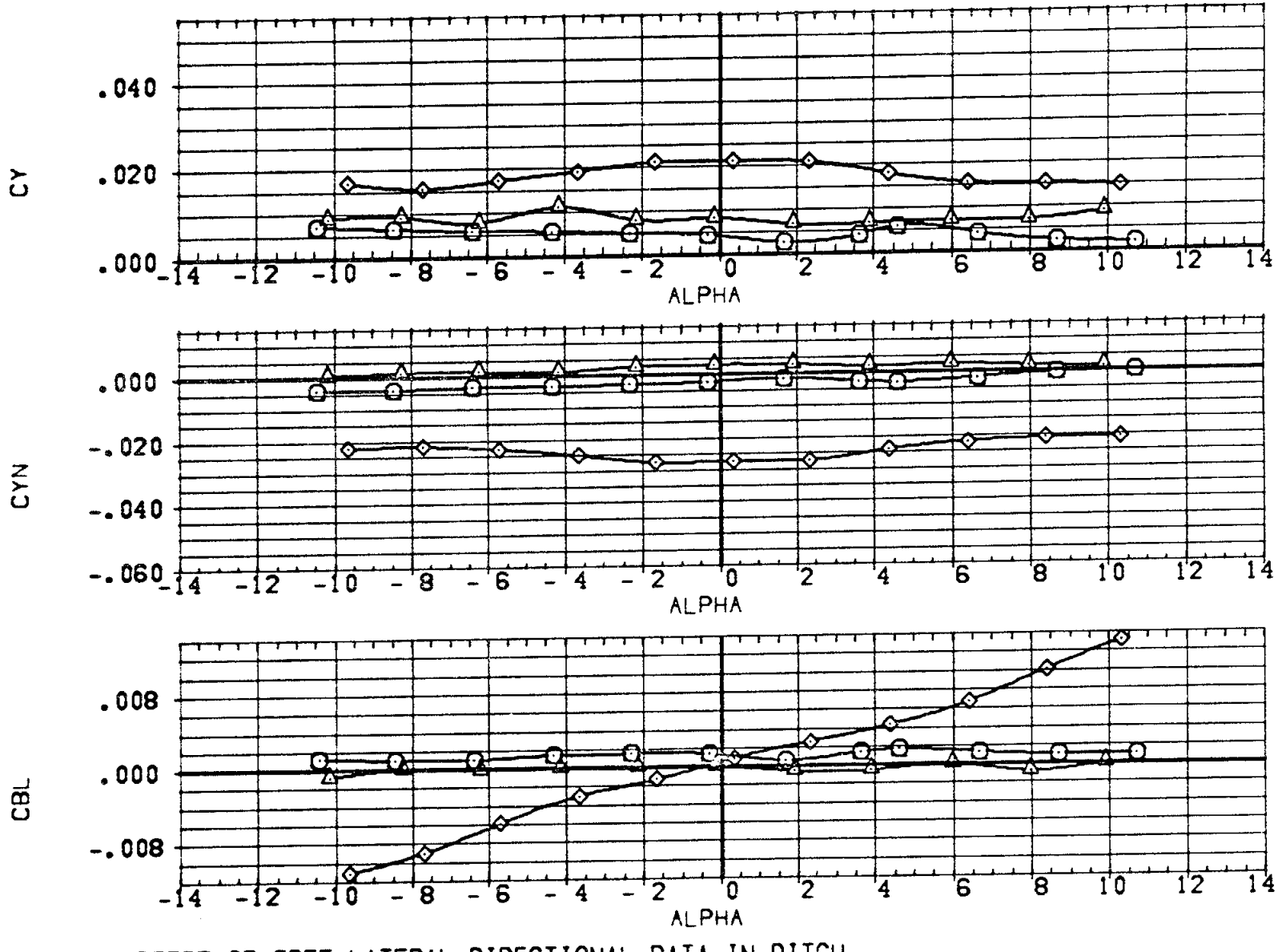
INTERFERENCE FREE LATERAL-DIRECTIONAL DATA IN PITCH

(G)MACH = 2.99

DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72501)	○	MSFC 545 (1A1) NAR ATP BL ORBITER-(01)
(A72601)	△	MSFC 545 (1A1) NAR ATP BL LV-(T3)
(A72201)	◇	MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



INTERFERENCE FREE LATERAL-DIRECTIONAL DATA IN PITCH

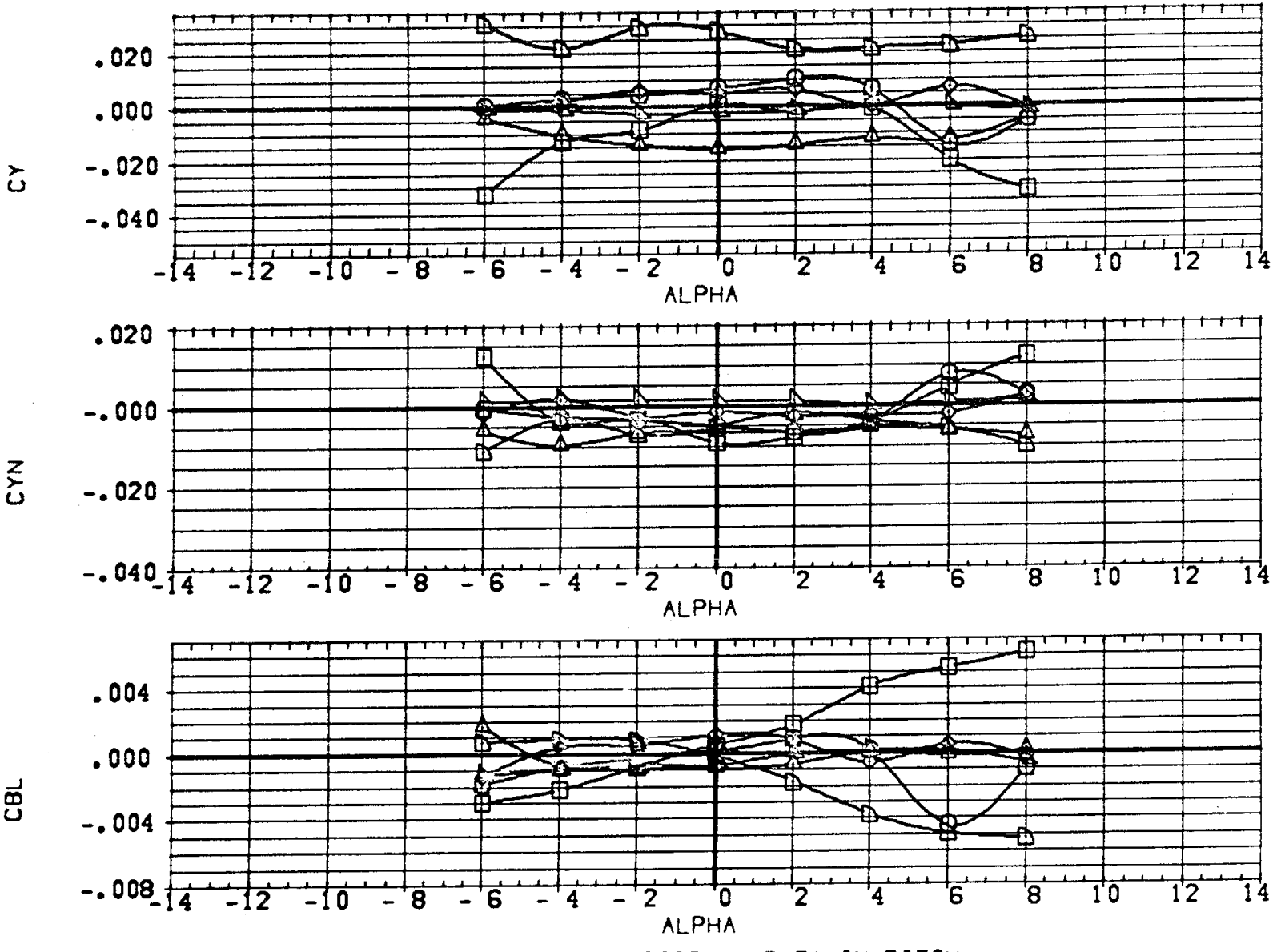
(H)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		
(R72A01)	○	MSFC 545 (IA1)	TANK ON ORBITER	
(R72B01)	□	MSFC 545 (IA1)	ORBITER ON TANK	
(R72C02)	◇	MSFC 545 (IA1)	SRB ON TANK	
(R72D12)	△	MSFC 545 (IA1)	TANK ON SRB	
(R72E02)	▽	MSFC 545 (IA1)	SRB ON ORBITER	
(R72F14)	⬠	MSFC 545 (IA1)	ORBITER ON SRB	

ORBINC	DELTAZ	RUDFLR	X-SRB
		10.000	
0.000	0.120	10.000	
0.000	0.120	10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



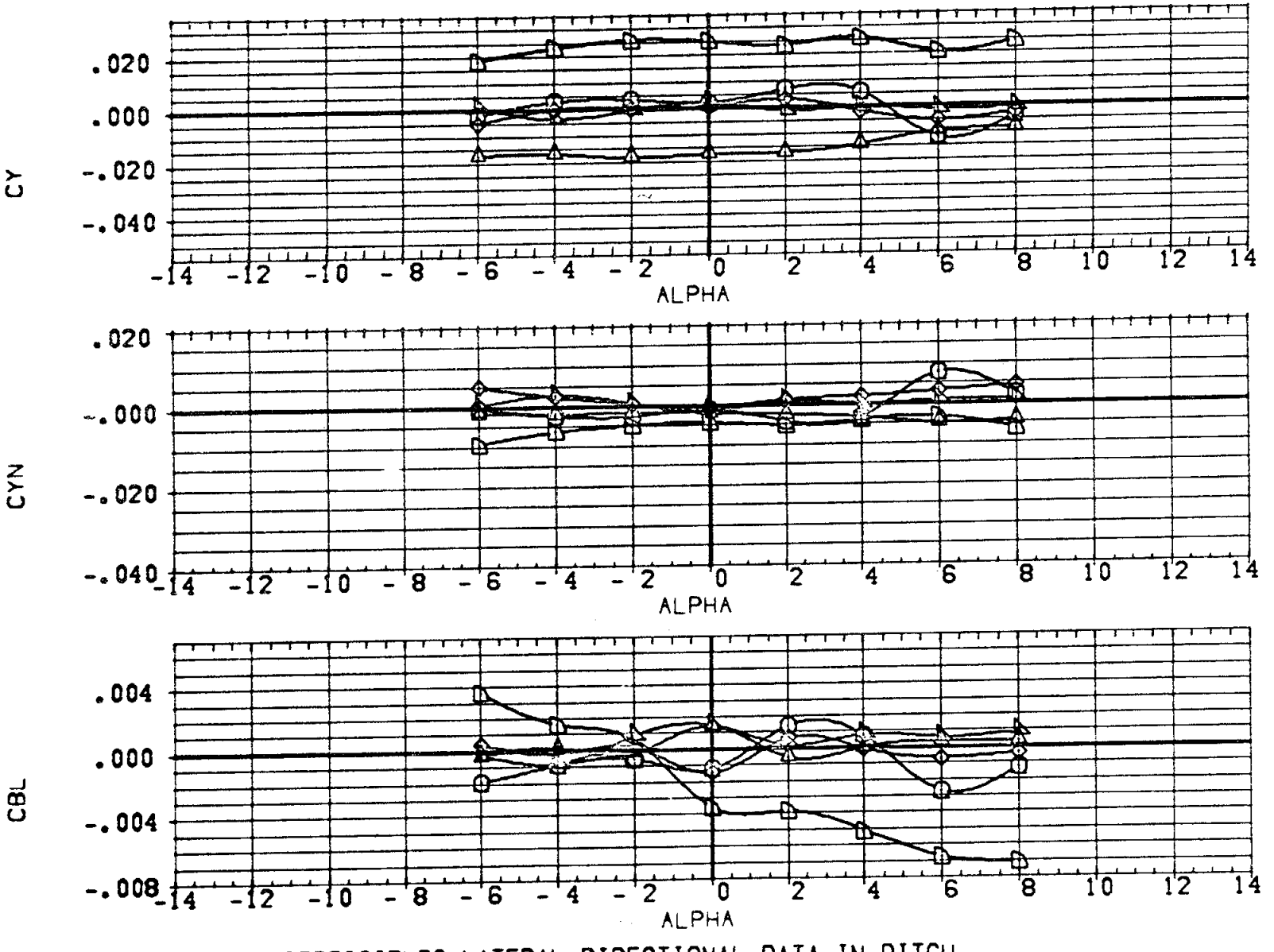
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL DATA IN PITCH

(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		
(R72A01)		MSFC 545 (IA1)	TANK ON ORBITER	
(R72B01)		MSFC 545 (IA1)	ORBITER ON TANK	
(R72C02)		MSFC 545 (IA1)	SRB ON TANK	
(R72D12)		DATA NOT AVAILABLE		
(R72E02)		MSFC 545 (IA1)	SRB ON ORBITER	
(R72F14)		MSFC 545 (IA1)	ORBITER ON SRB	

ORBINC	DELTAZ	RUDFLR	X-SRB
		10.000	
0.000	0.120	10.000	
0.000	0.120	10.000	

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT

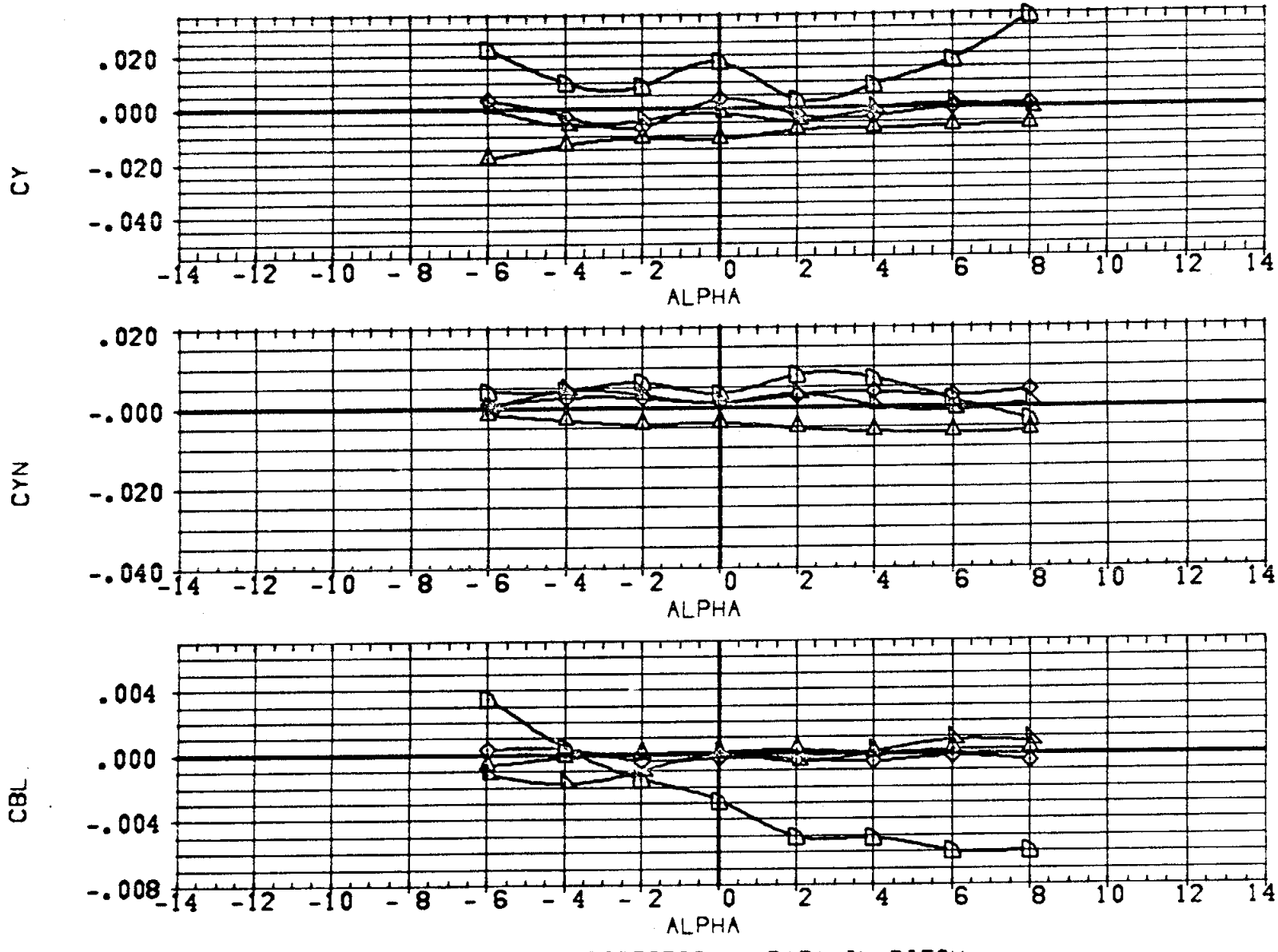


INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL DATA IN PITCH

(B)MACH = 0.90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(R72A01)		DATA NOT AVAILABLE			10.000	
(R72B01)		MSFC 545 (IA1) ORBITER ON TANK				
(R72C02)		MSFC 545 (IA1) SRB ON TANK	0.000	0.120	10.000	
(R72D12)		DATA NOT AVAILABLE				
(R72E02)		MSFC 545 (IA1) SRB ON ORBITER	0.000	0.120	10.000	
(R72F14)		MSFC 545 (IA1) ORBITER ON SRB				

REFERENCE INFORMATION		
SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL DATA IN PITCH

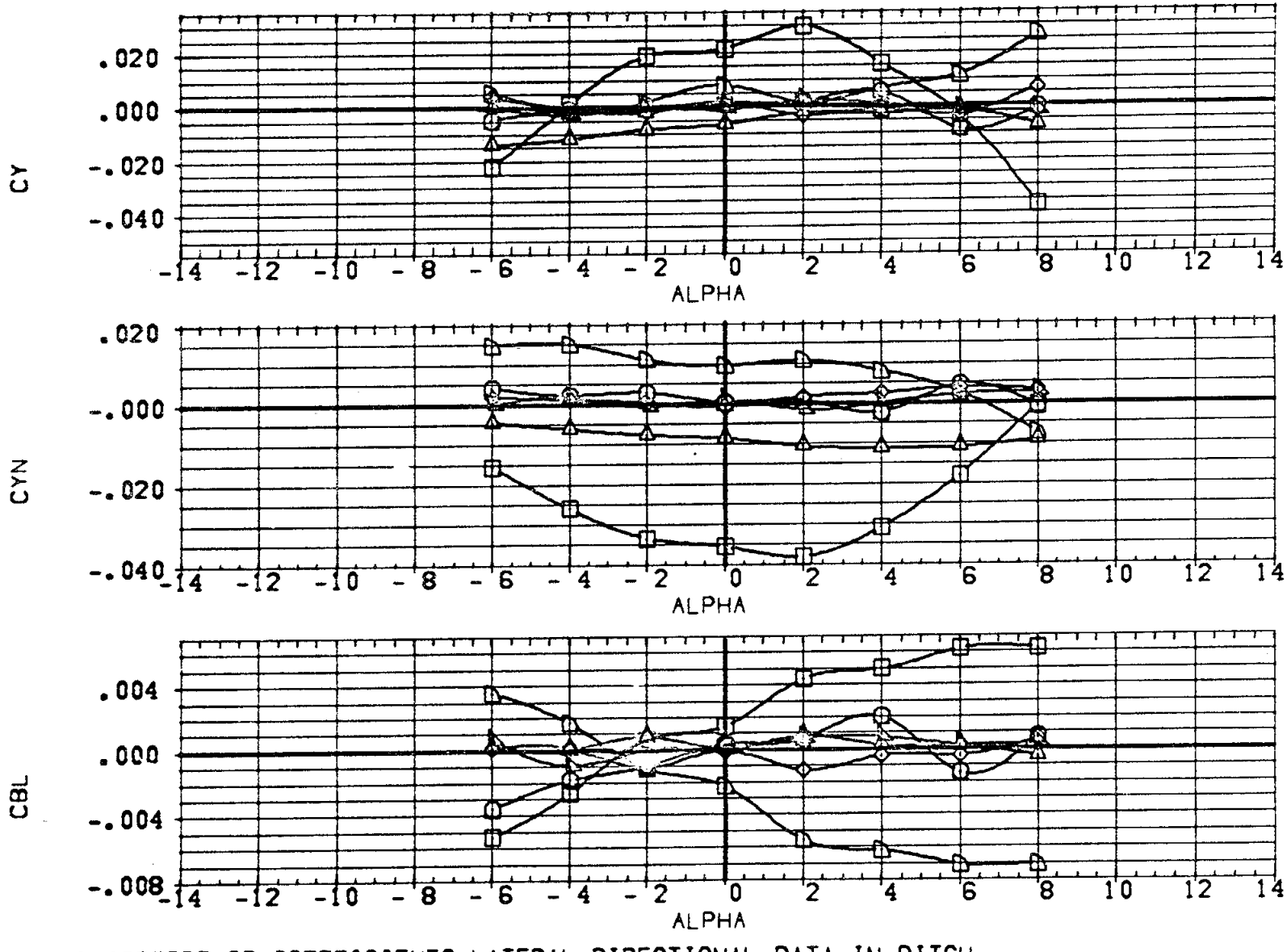
(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)		MSFC 545 (1A1)	TANK ON ORBITER
(R72B01)		MSFC 545 (1A1)	ORBITER ON TANK
(R72C02)		MSFC 545 (1A1)	SRB ON TANK
(R72D12)		MSFC 545 (1A1)	TANK ON SRB
(R72E02)		MSFC 545 (1A1)	SRB ON ORBITER
(R72F14)		MSFC 545 (1A1)	ORBITER ON SRB

ORBINC	DELTAZ	RUDFLR	X-SRB
		10.000	
0.000	0.120	10.000	
0.000	0.120	10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



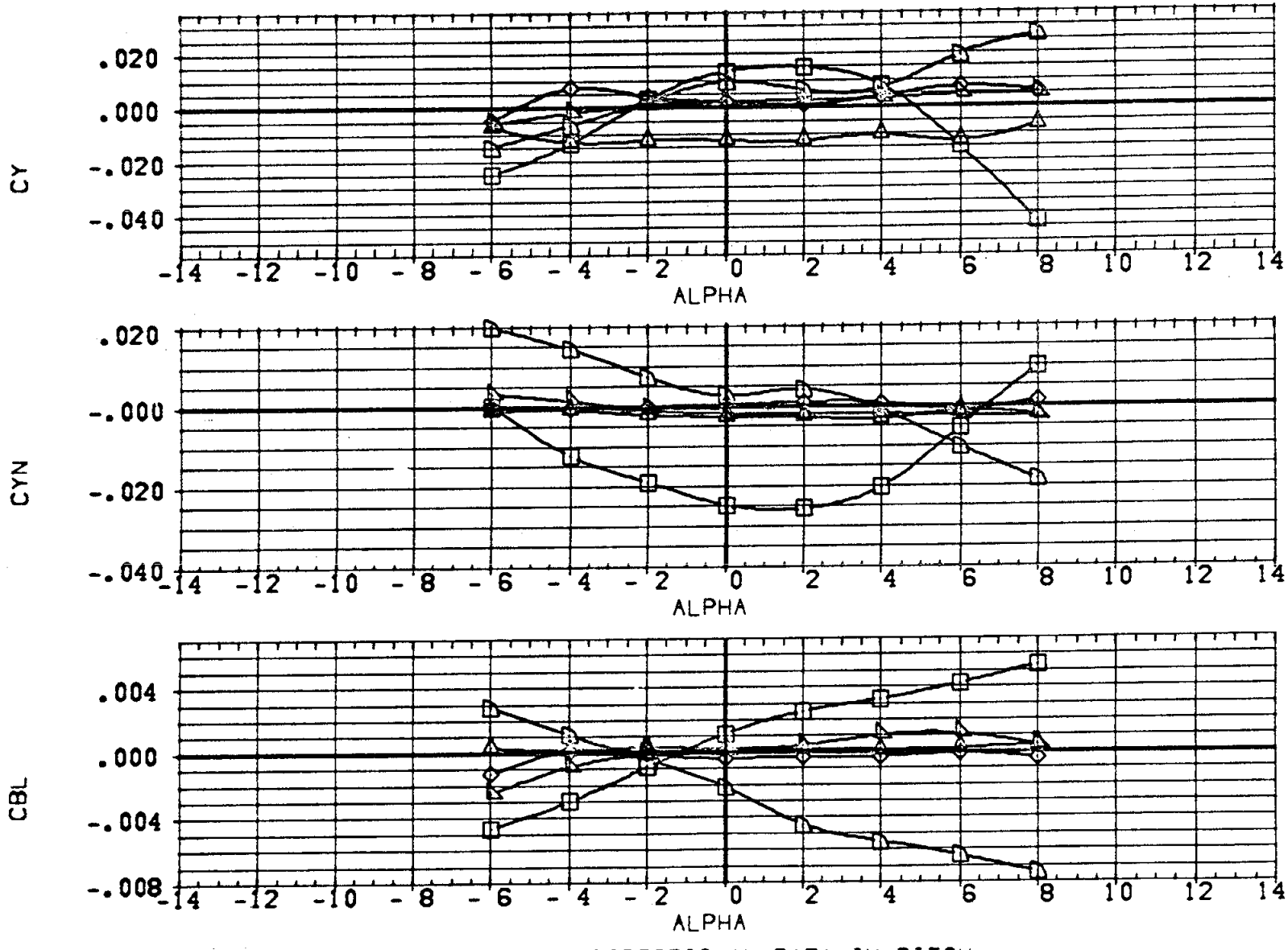
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL DATA IN PITCH

(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR	X-SRB
(R72A01)		DATA NOT AVAILABLE			10.000	
(R72B01)		MSFC 545 (IA1) ORBITER ON TANK				
(R72C02)		MSFC 545 (IA1) SRB ON TANK	0.000	0.120	10.000	
(R72D12)		MSFC 545 (IA1) TANK ON SRB				
(R72E02)		MSFC 545 (IA1) SRB ON ORBITER	0.000	0.120	10.000	
(R72F14)		MSFC 545 (IA1) ORBITER ON SRB				

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL DATA IN PITCH

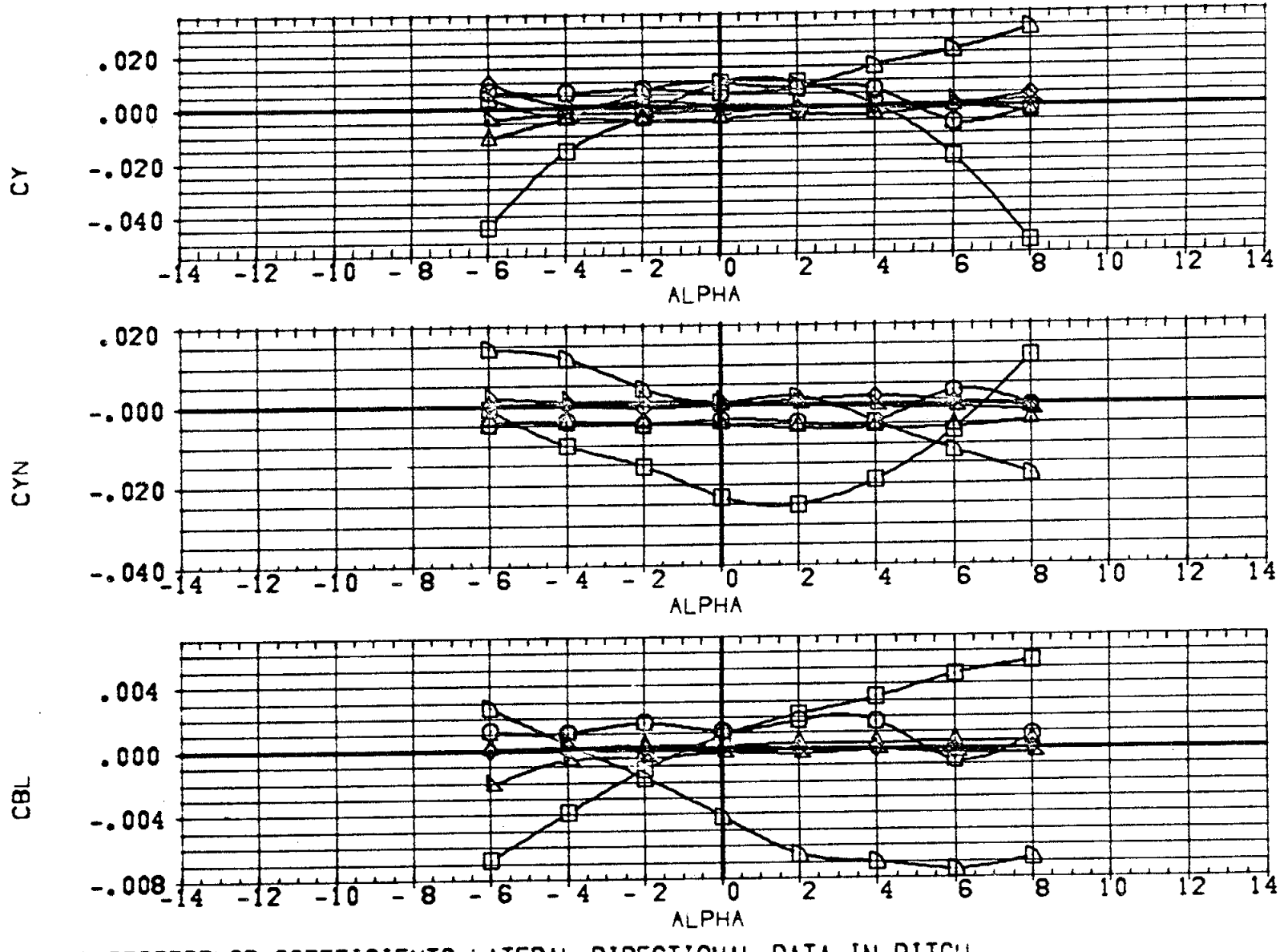
(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72A01)		MSFC 545 (1A1)	TANK ON ORBITER
(R72B01)		MSFC 545 (1A1)	ORBITER ON TANK
(R72C02)		MSFC 545 (1A1)	SRB ON TANK
(R72D12)		MSFC 545 (1A1)	TANK ON SRB
(R72E02)		MSFC 545 (1A1)	SRB ON ORBITER
(R72F14)		MSFC 545 (1A1)	ORBITER ON SRB

ORBINC	DELTAZ	RUDFLR	X-SRB
		10.000	
0.000	0.120	10.000	
0.000	0.120	10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL DATA IN PITCH

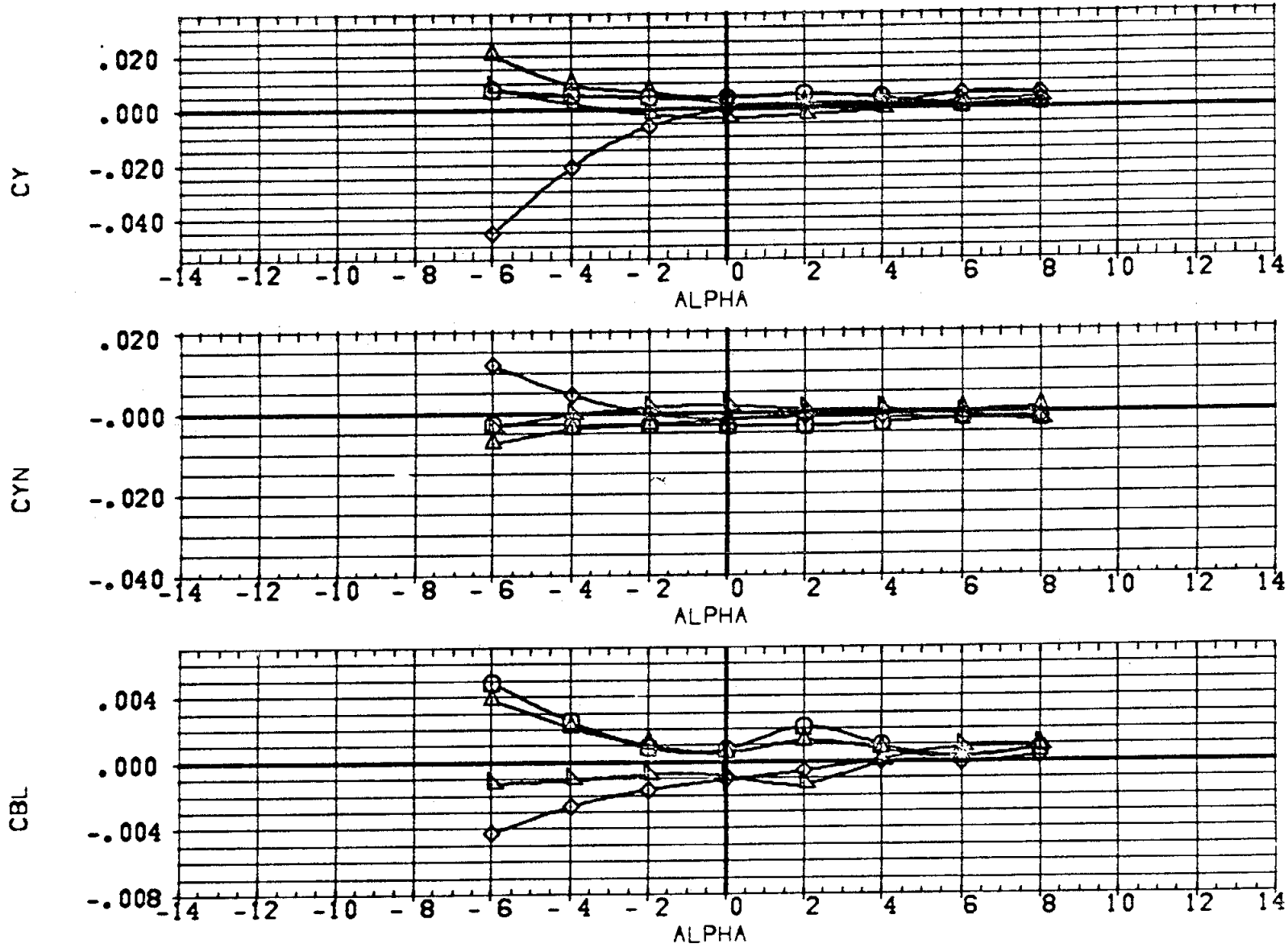
(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(R72A01)	○	MSFC 545 (IA1) TANK ON ORBITER
(R72B01)	□	MSFC 545 (IA1) ORBITER ON TANK
(R72C02)	◇	MSFC 545 (IA1) SRB ON TANK
(R72D12)	△	DATA NOT AVAILABLE
(R72E02)	▽	MSFC 545 (IA1) SRB ON ORBITER
(R72F14)	◁	DATA NOT AVAILABLE

ORBINC	DELTAZ	RUDFLR	X-SRB
		10.000	
0.000	0.120	10.000	
0.000	0.120	10.000	

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1326.0	IN.
BREF	1326.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



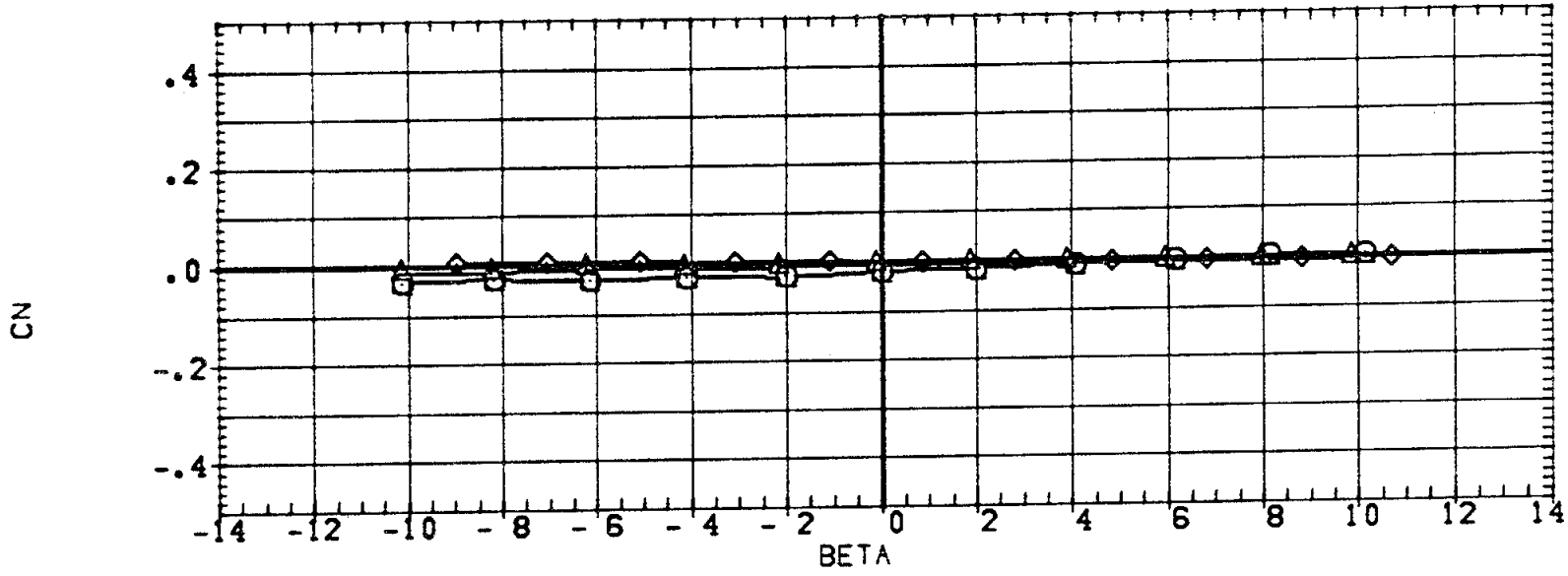
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL DATA IN PITCH

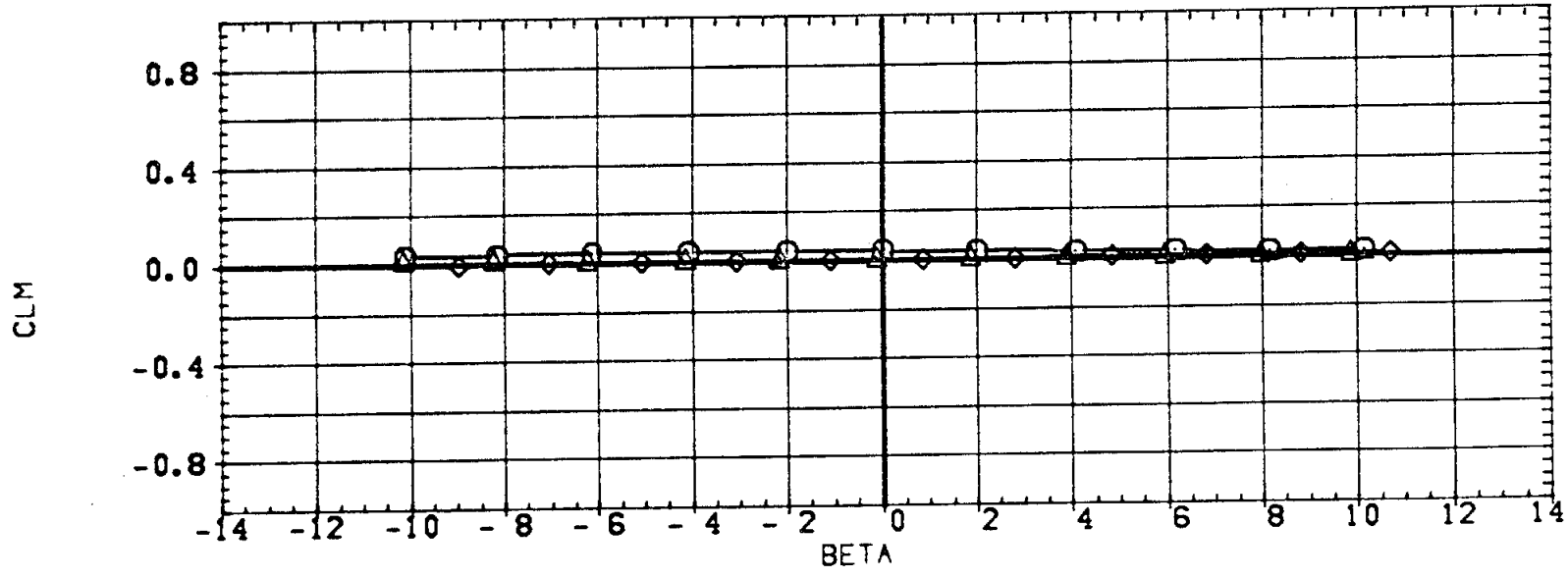
(G)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2904)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(AP2602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(AP2202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





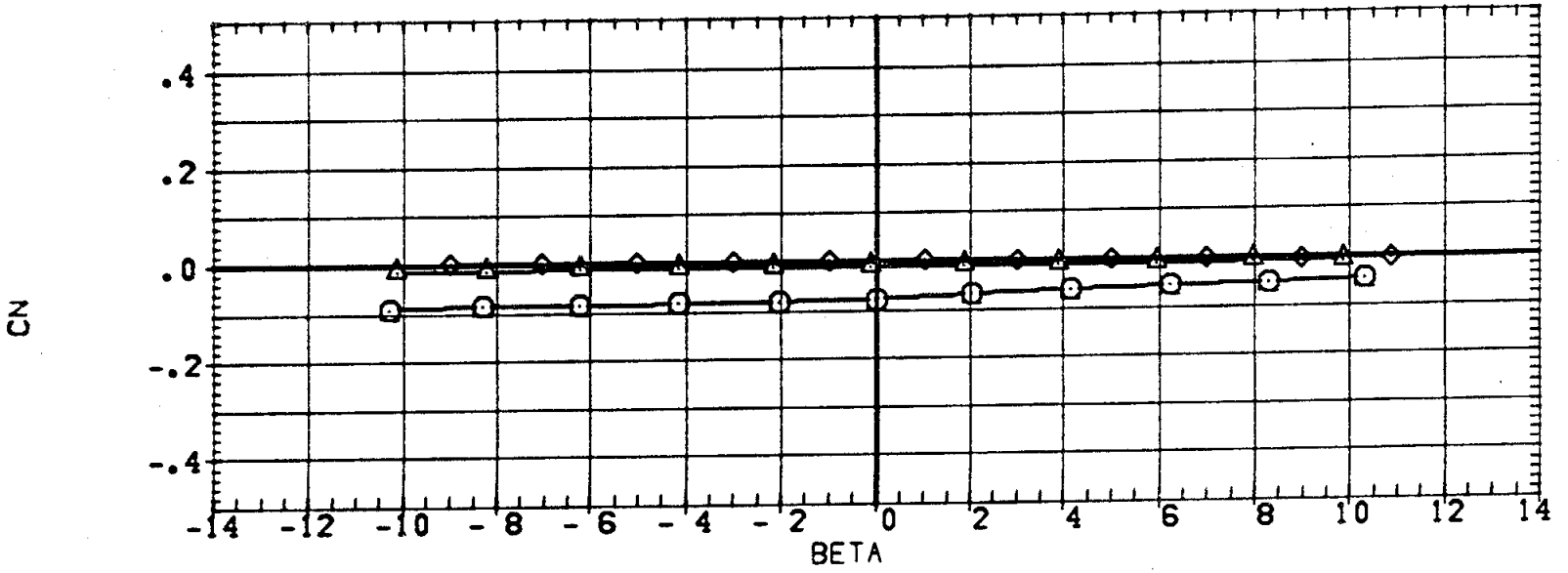
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

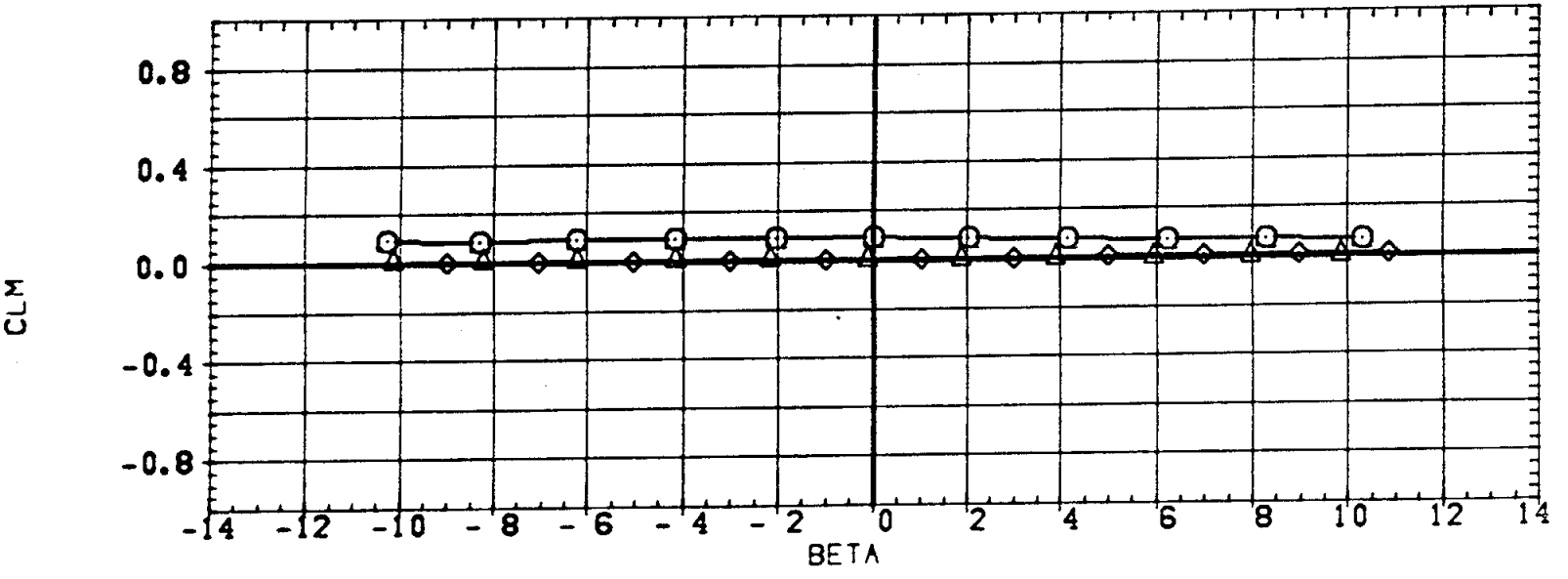
(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





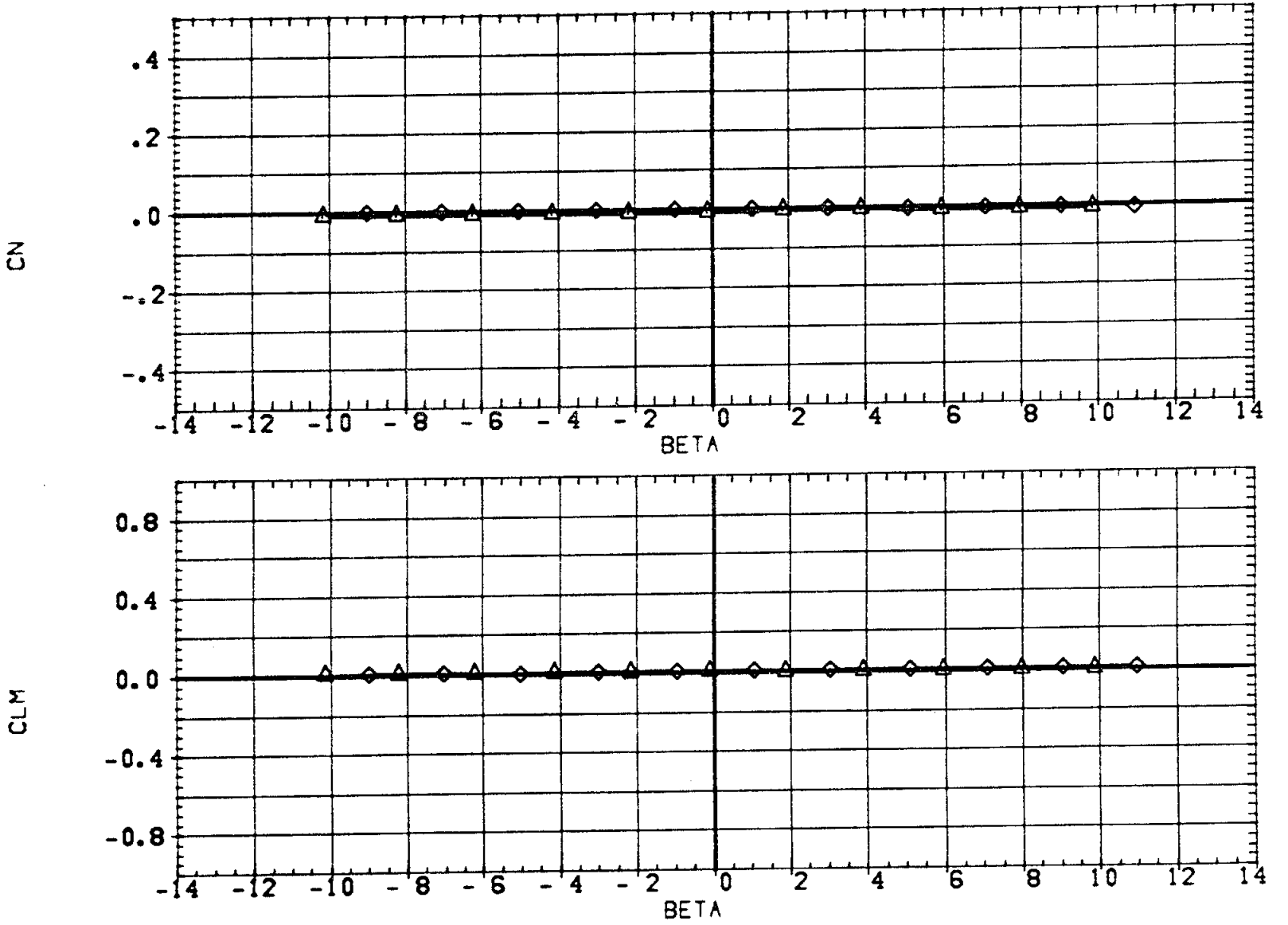
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(B)MACH = 0.90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	DATA NOT AVAILABLE
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



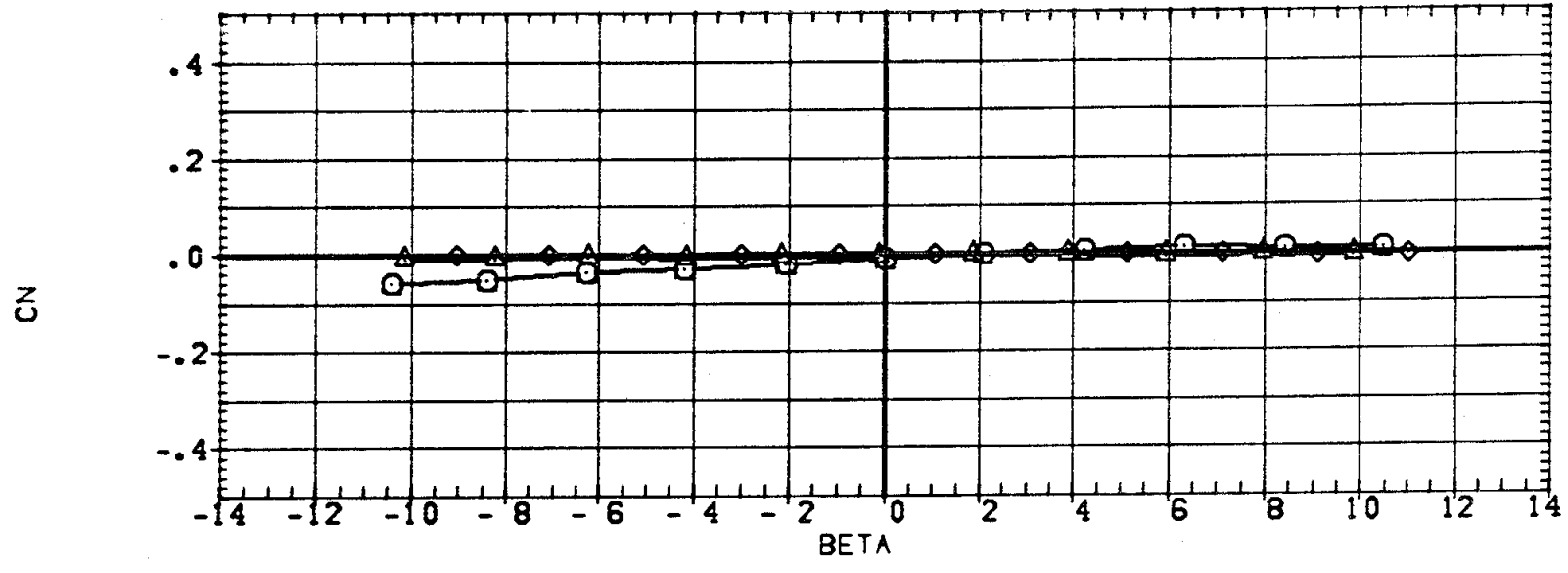
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

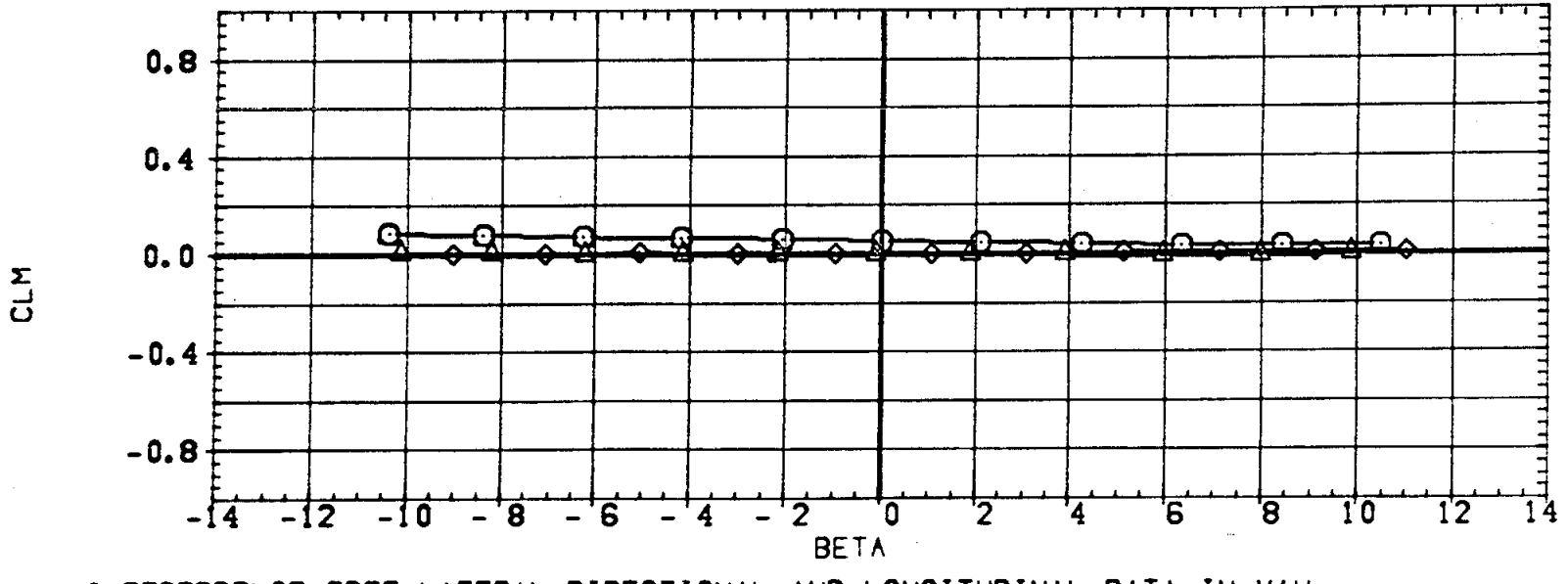
(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1326.0	IN.
BREF	1326.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(O)MACH = 1.20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

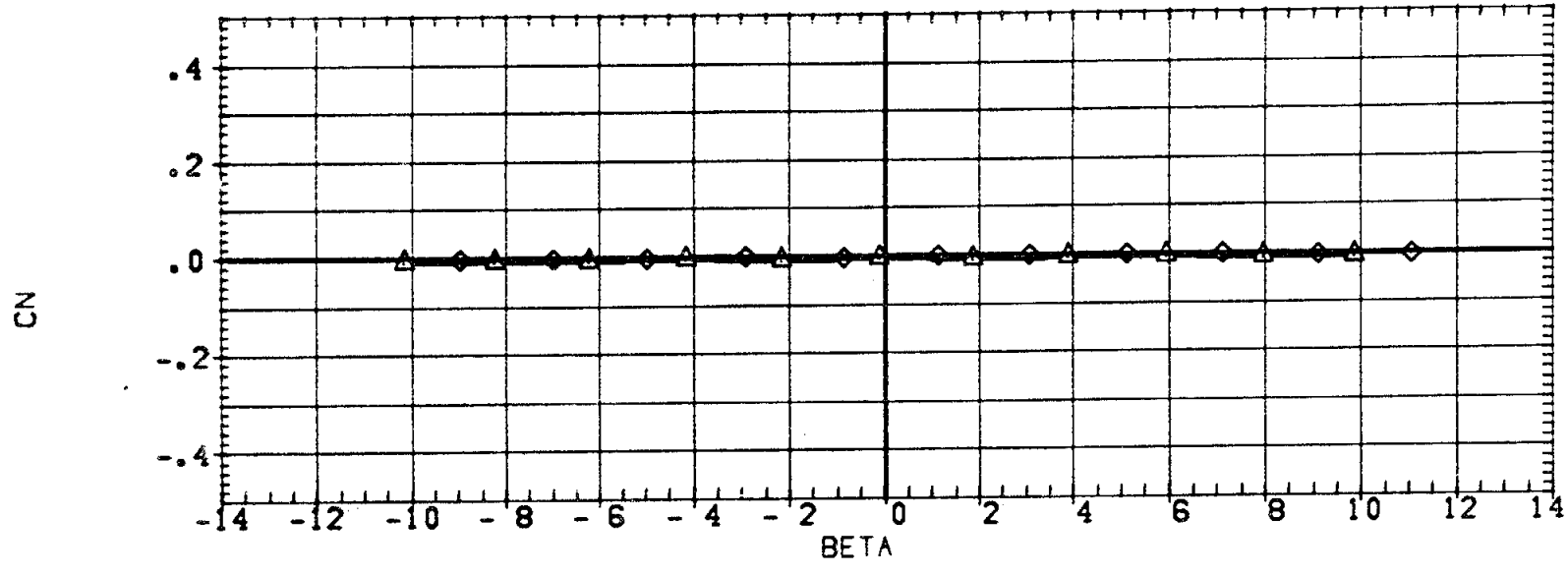
(A72504) ○ DATA NOT AVAILABLE

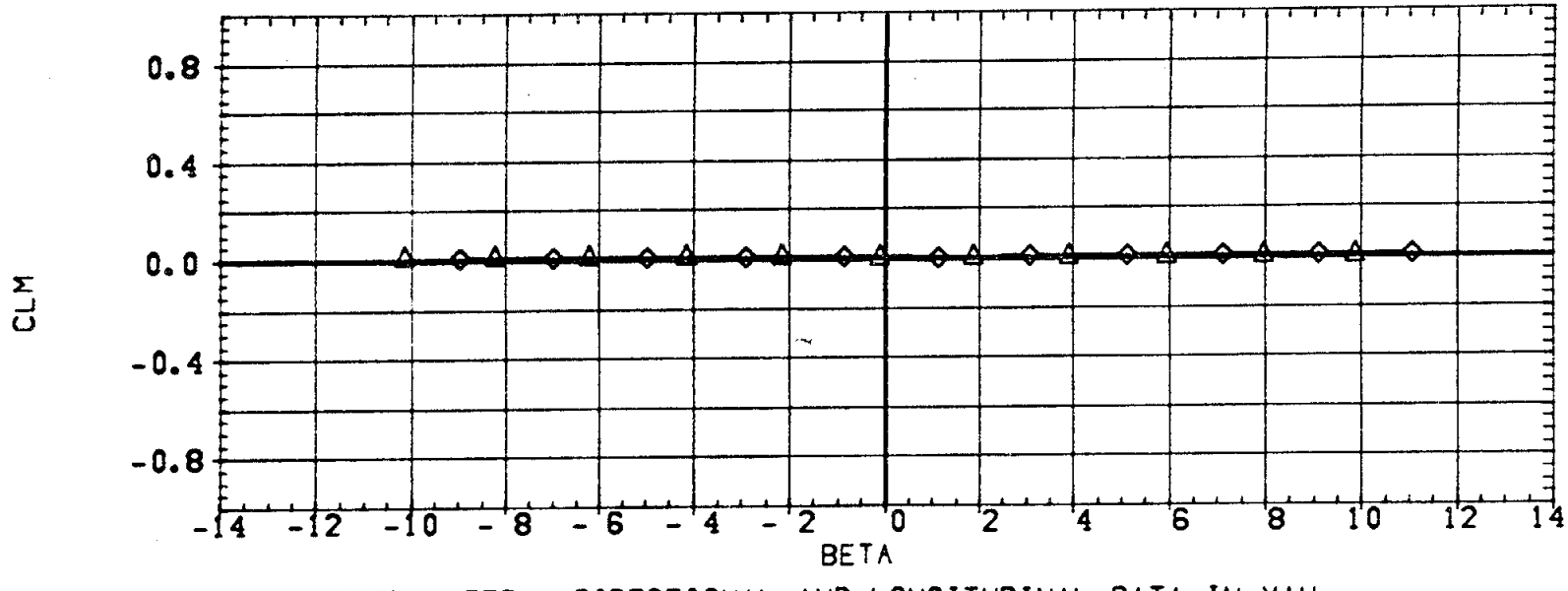
(A72602) △ MSFC 545 (1A1) NAR ATP BL LV-(TS)

(A72202) ◇ MSFC 545 (1A1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





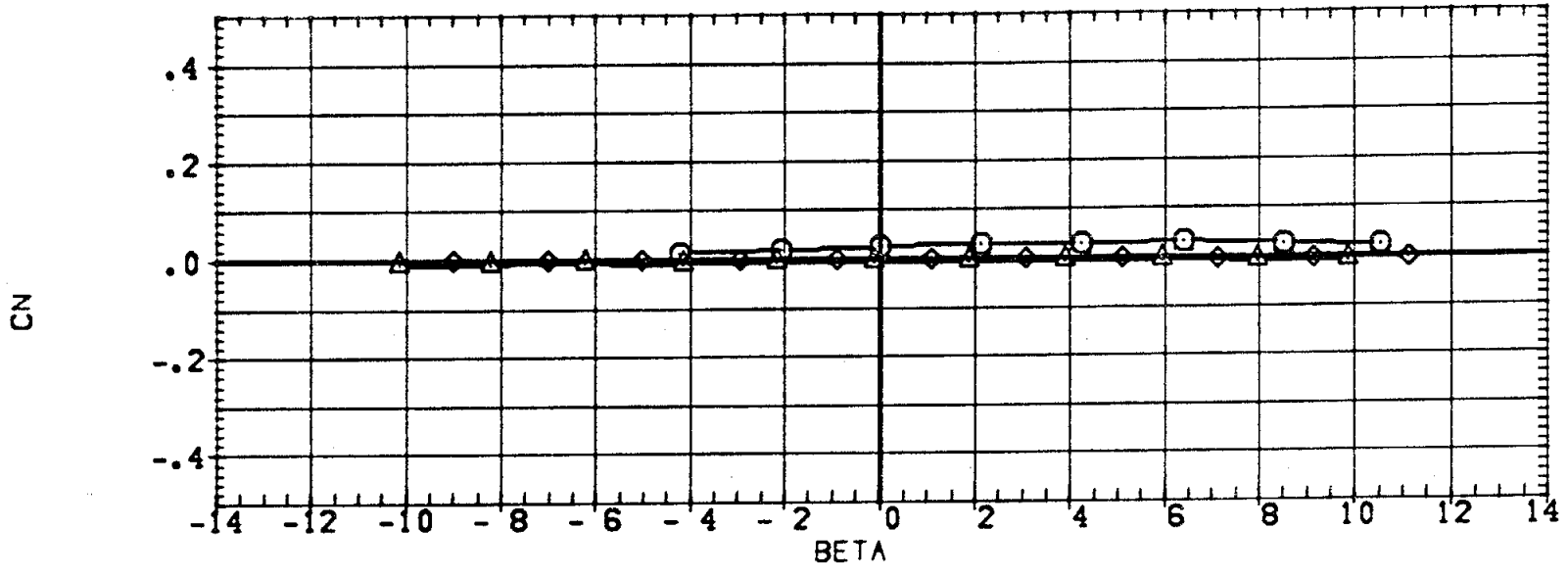
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

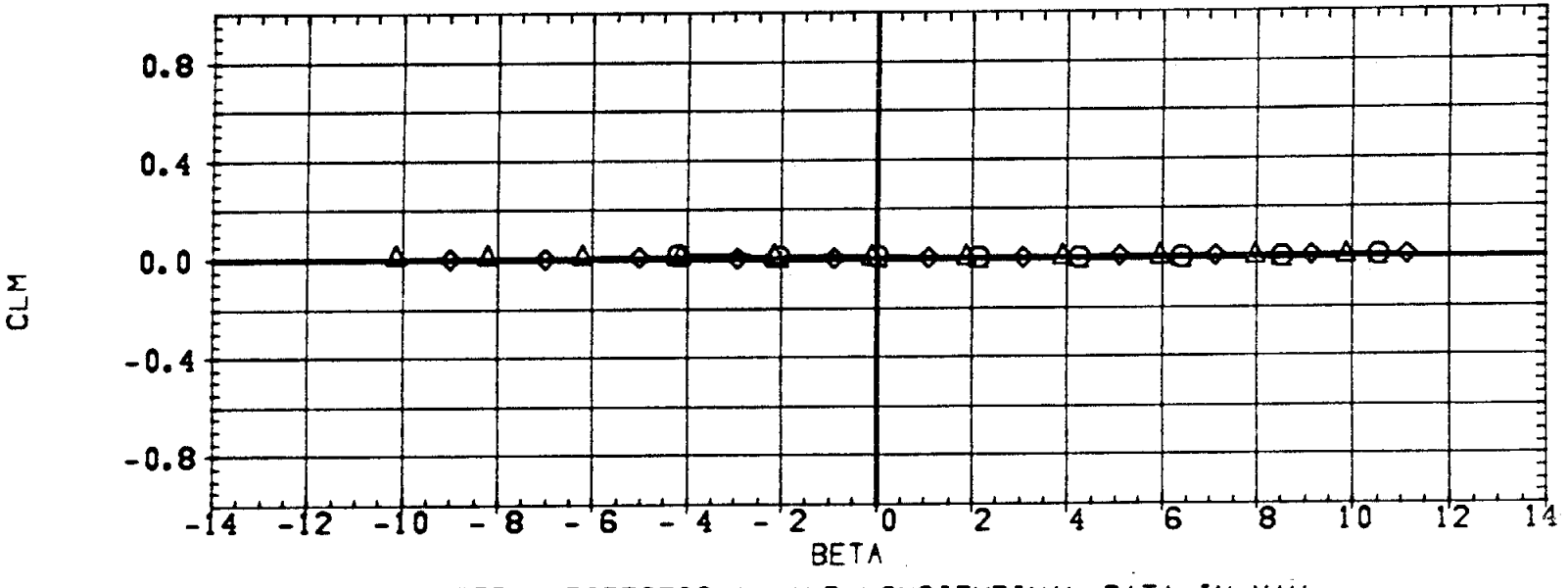
(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(F)MACH = 1.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION

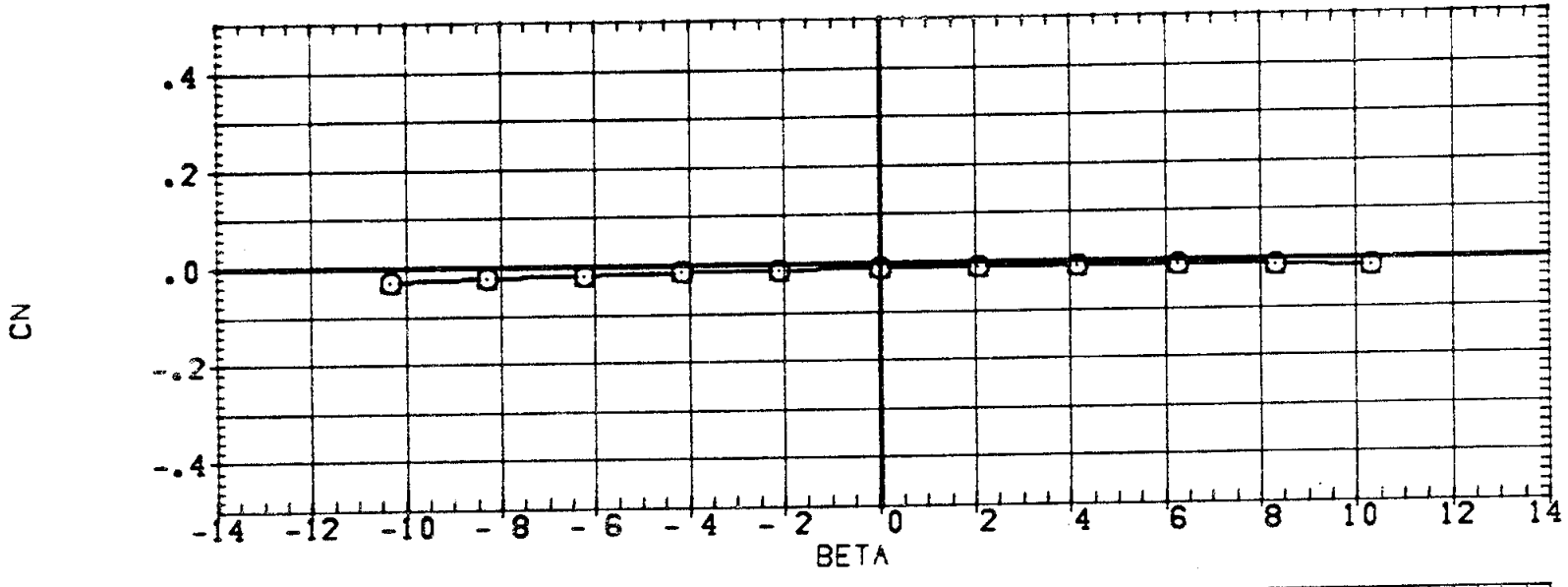
(A72504) ○ MSFC 545 (1A1) NAR ATP BL ORBITER-(01)

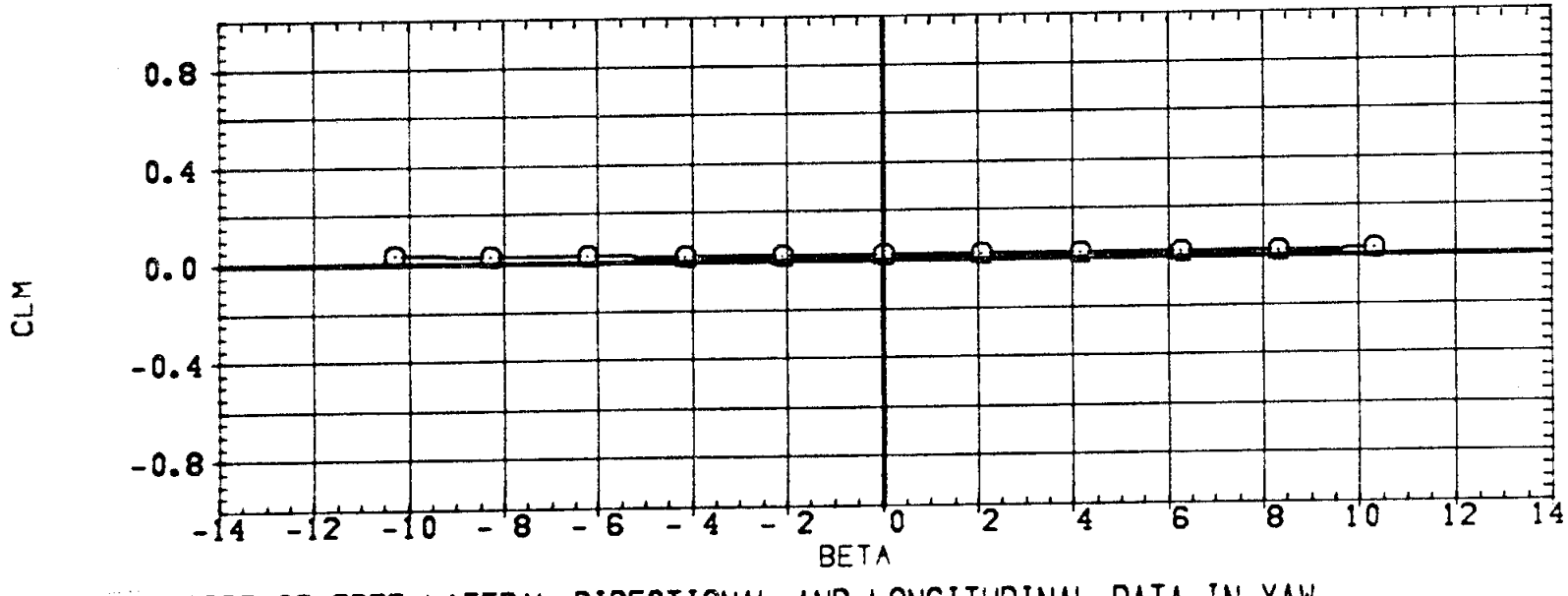
(A72602) △ DATA NOT AVAILABLE

(A72202) ◇ DATA NOT AVAILABLE

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





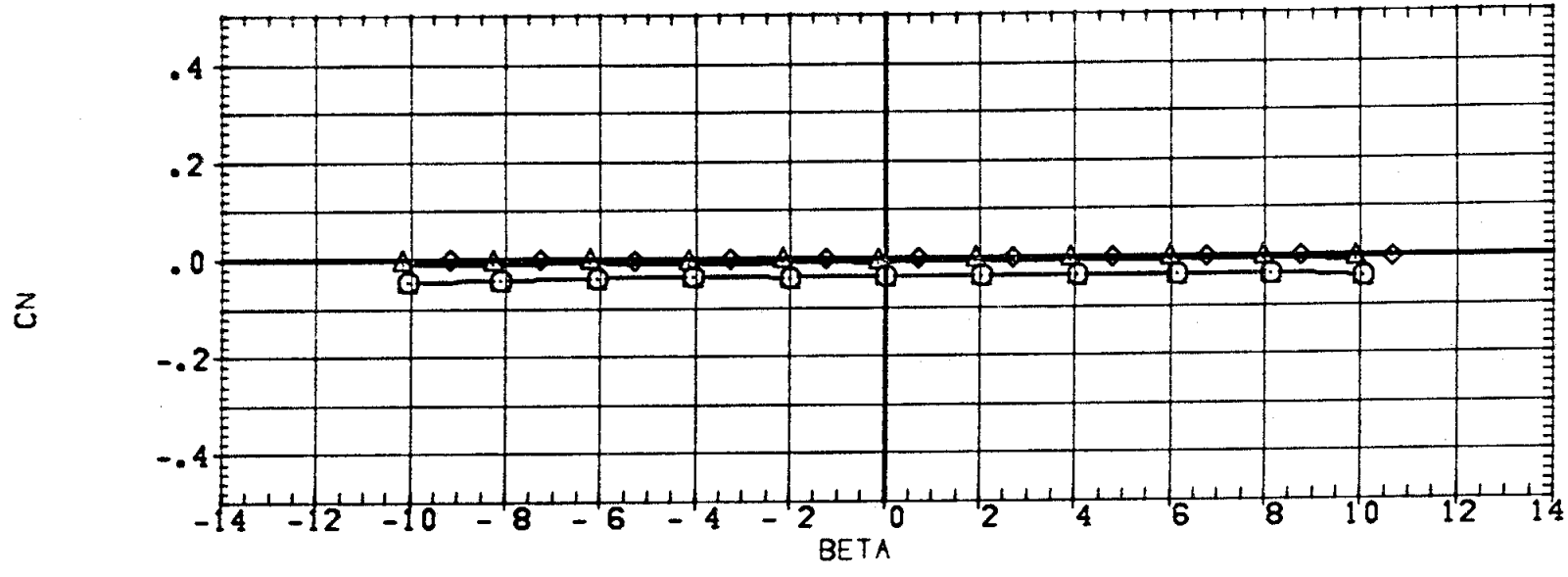
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

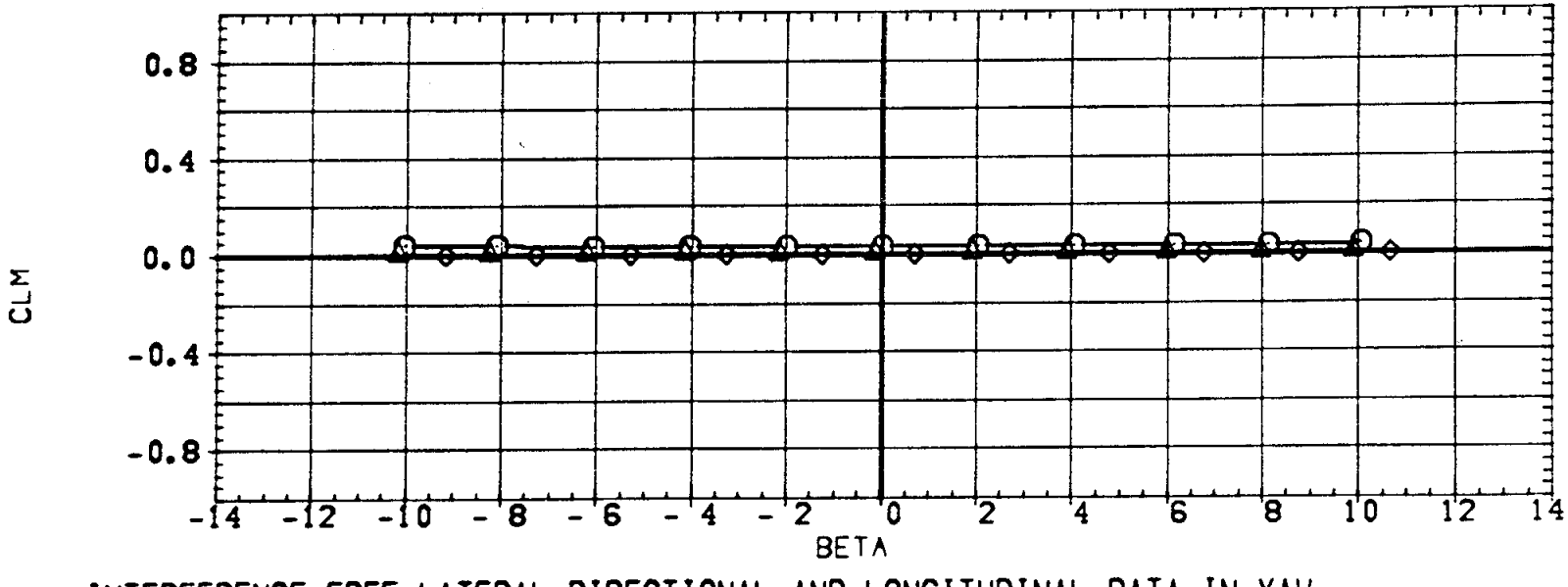
(G)MACH = 2.99

DATA SET SYMBOL		CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





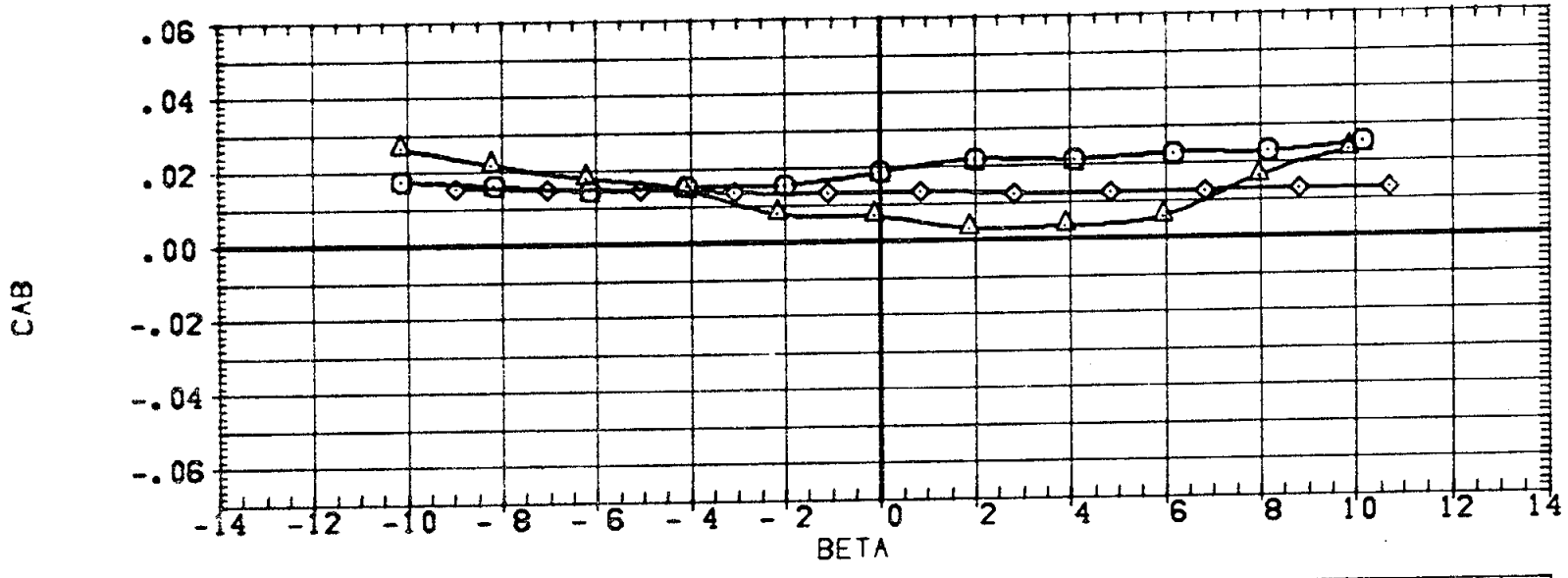
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

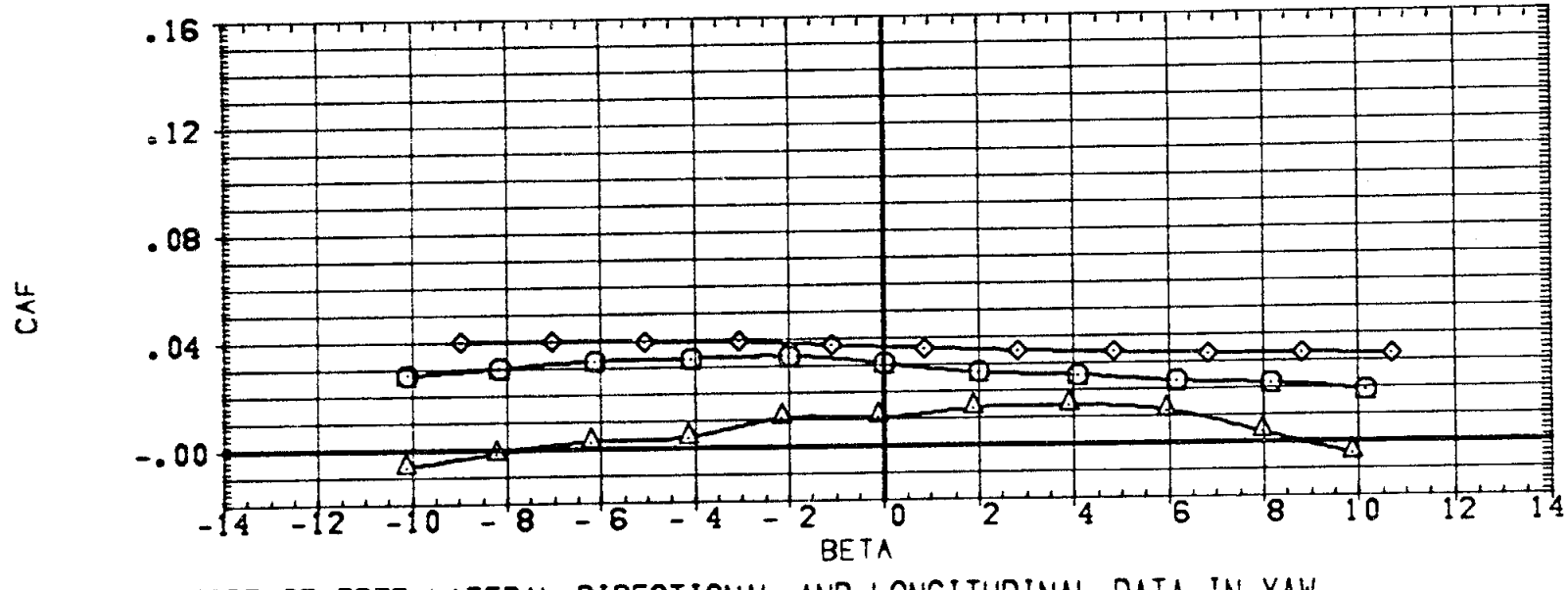
(H)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





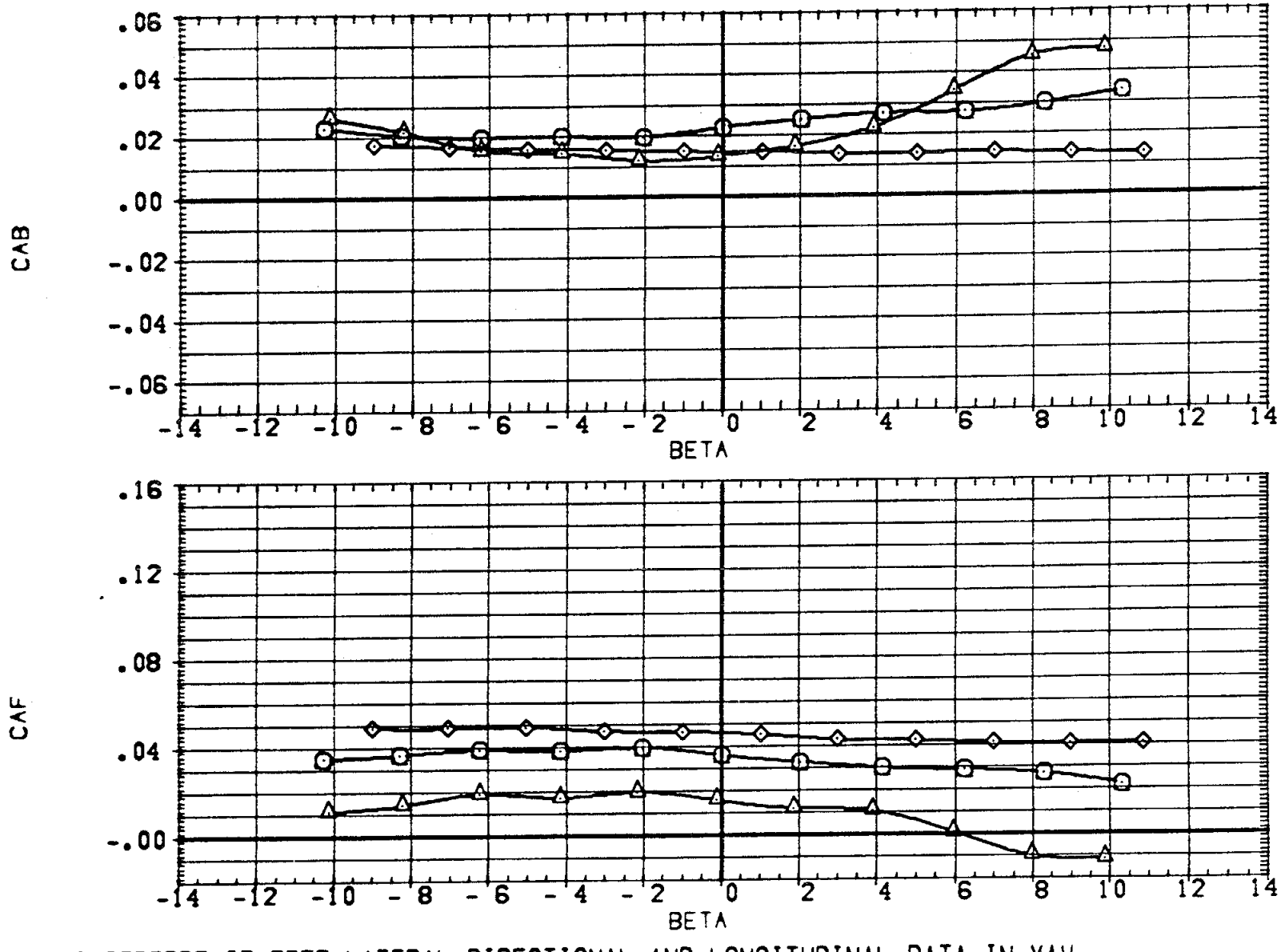
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(A)MACH = 0.60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



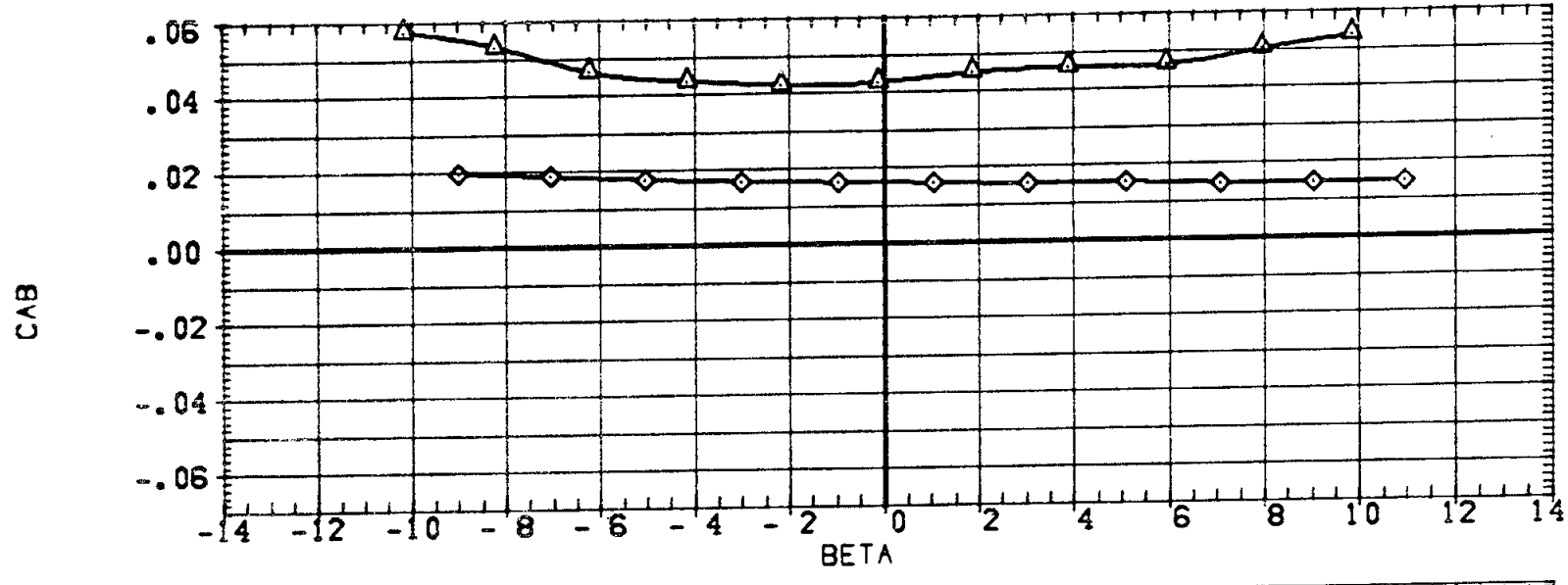
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

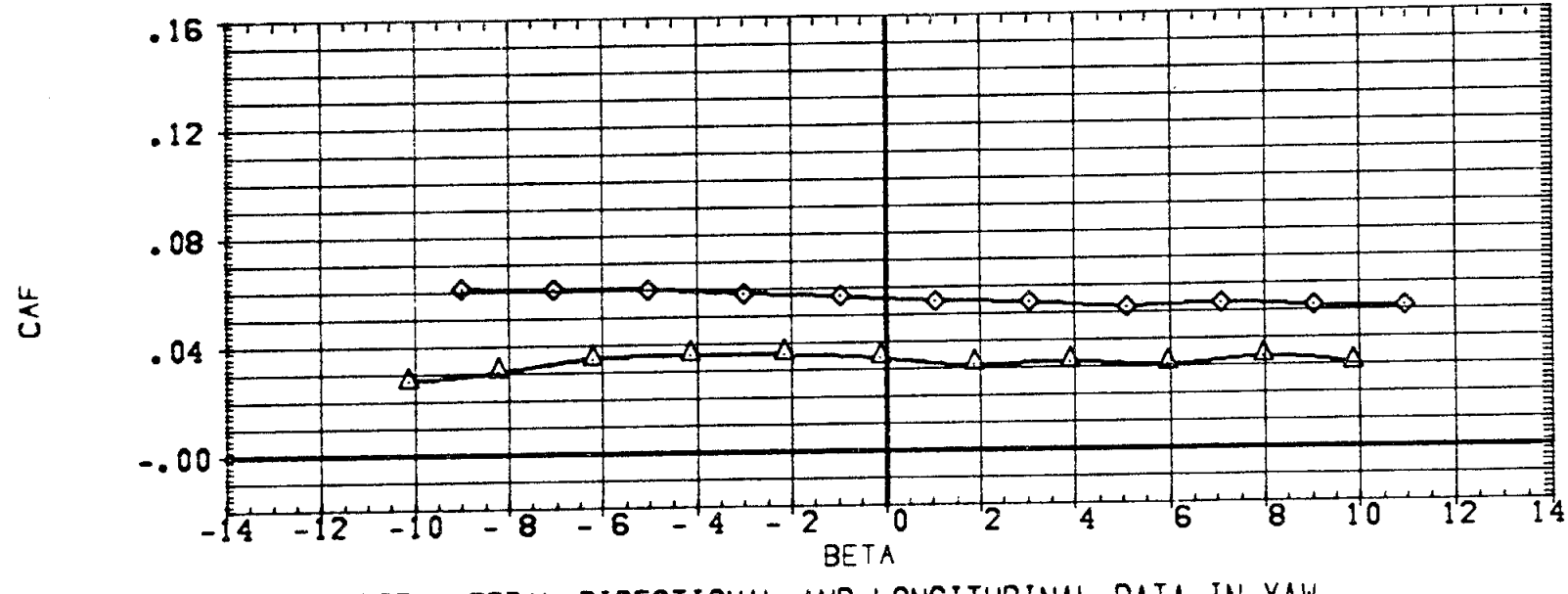
(B)MACH = 0.90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	DATA NOT AVAILABLE
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

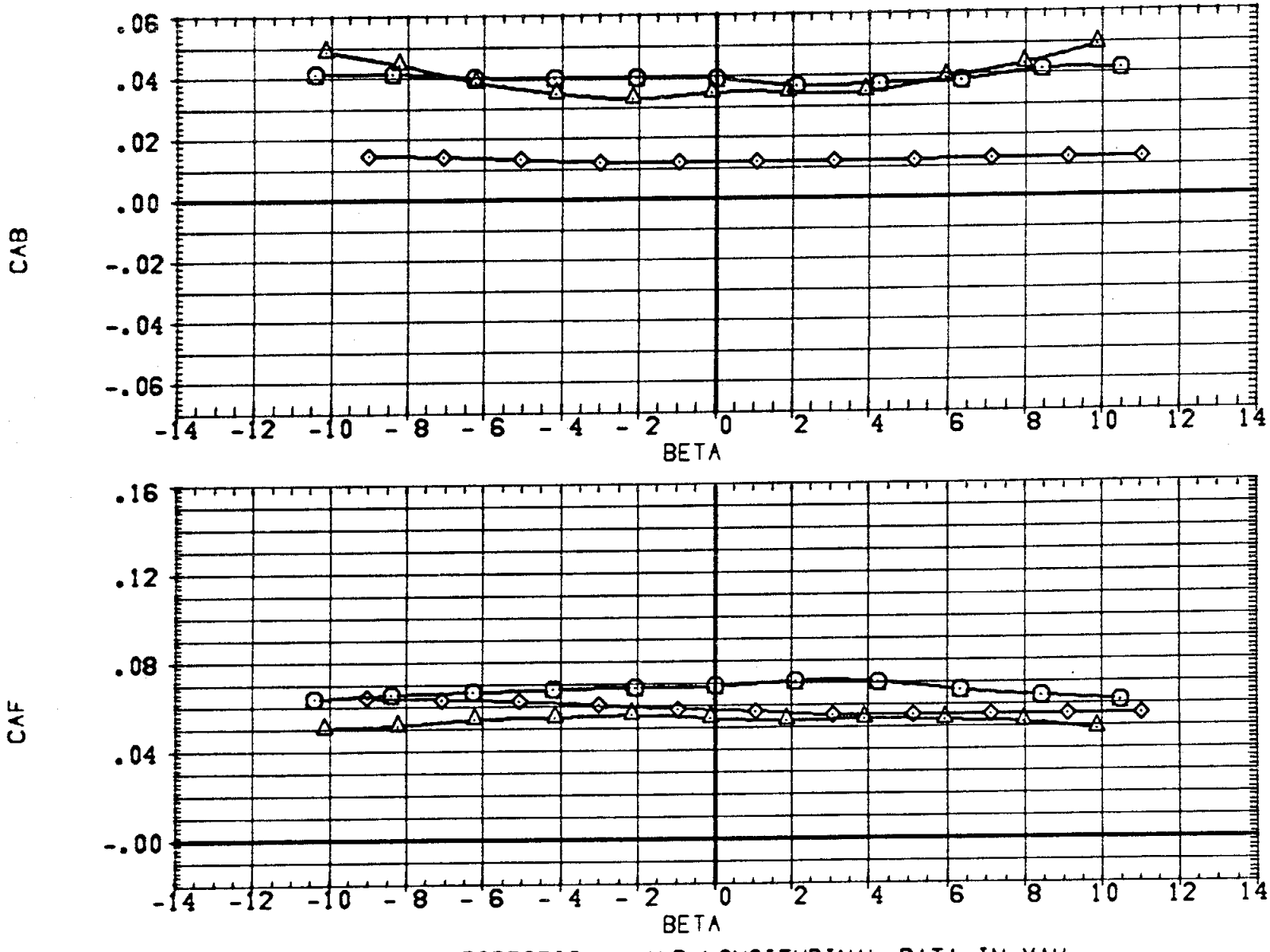
(C)MACH = 1.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T5)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT



INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(D)MACH = 1.20

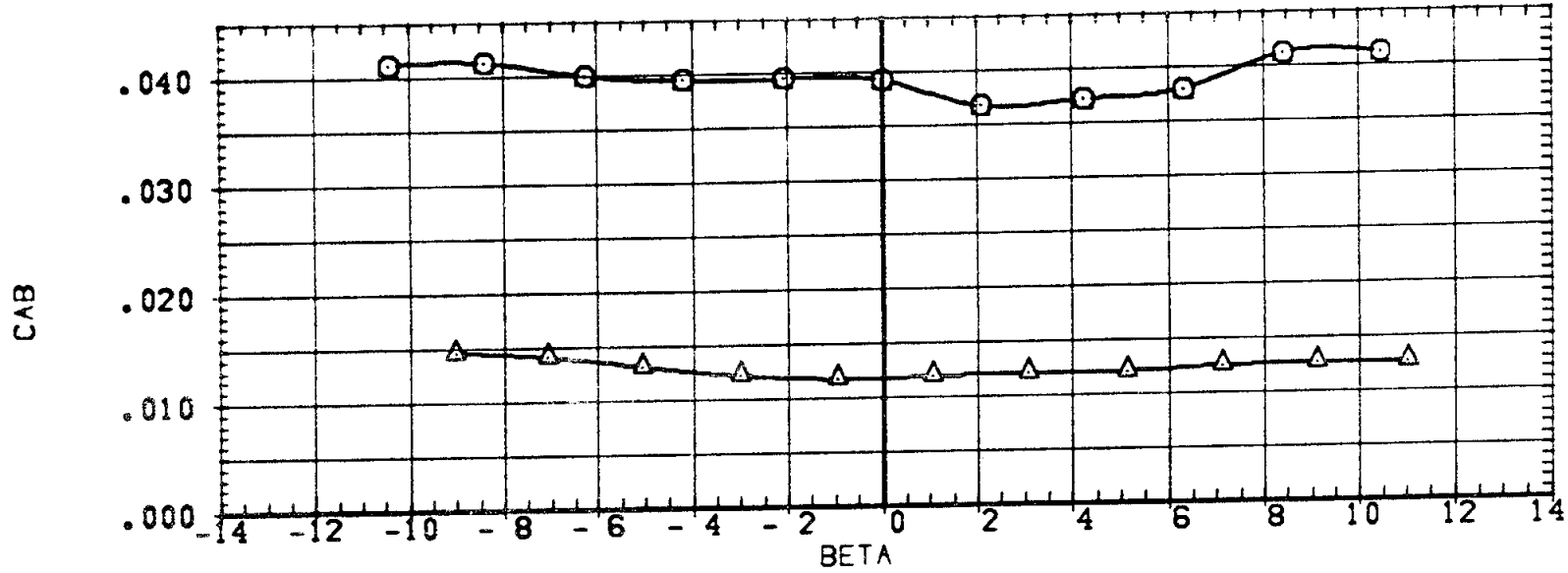
DATA SET SYMBOL CONFIGURATION DESCRIPTION

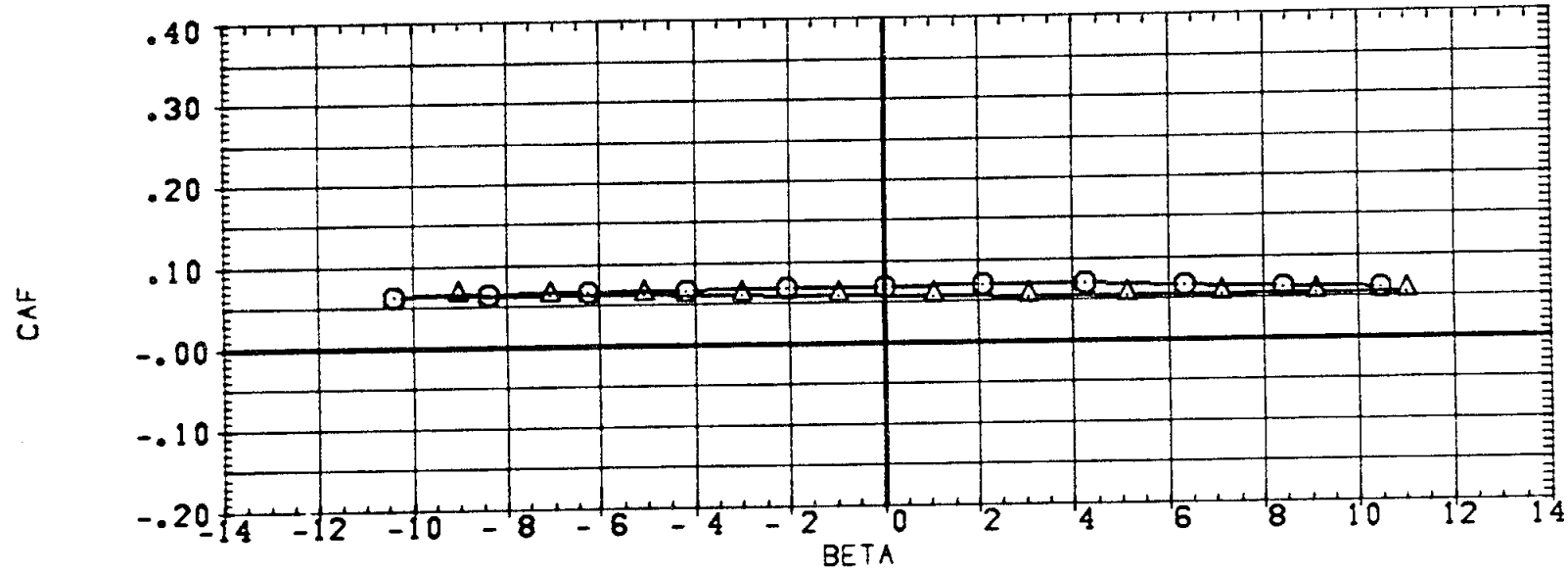
(A72504) ○ MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)

(A72202) △ MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0	SQ.FT.
LREF	1328.0	IN.
BREF	1328.0	IN.
XMRP	0.0	
YMRP	0.0	
ZMRP	0.0	
SCALE	100.0	PERCNT





INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

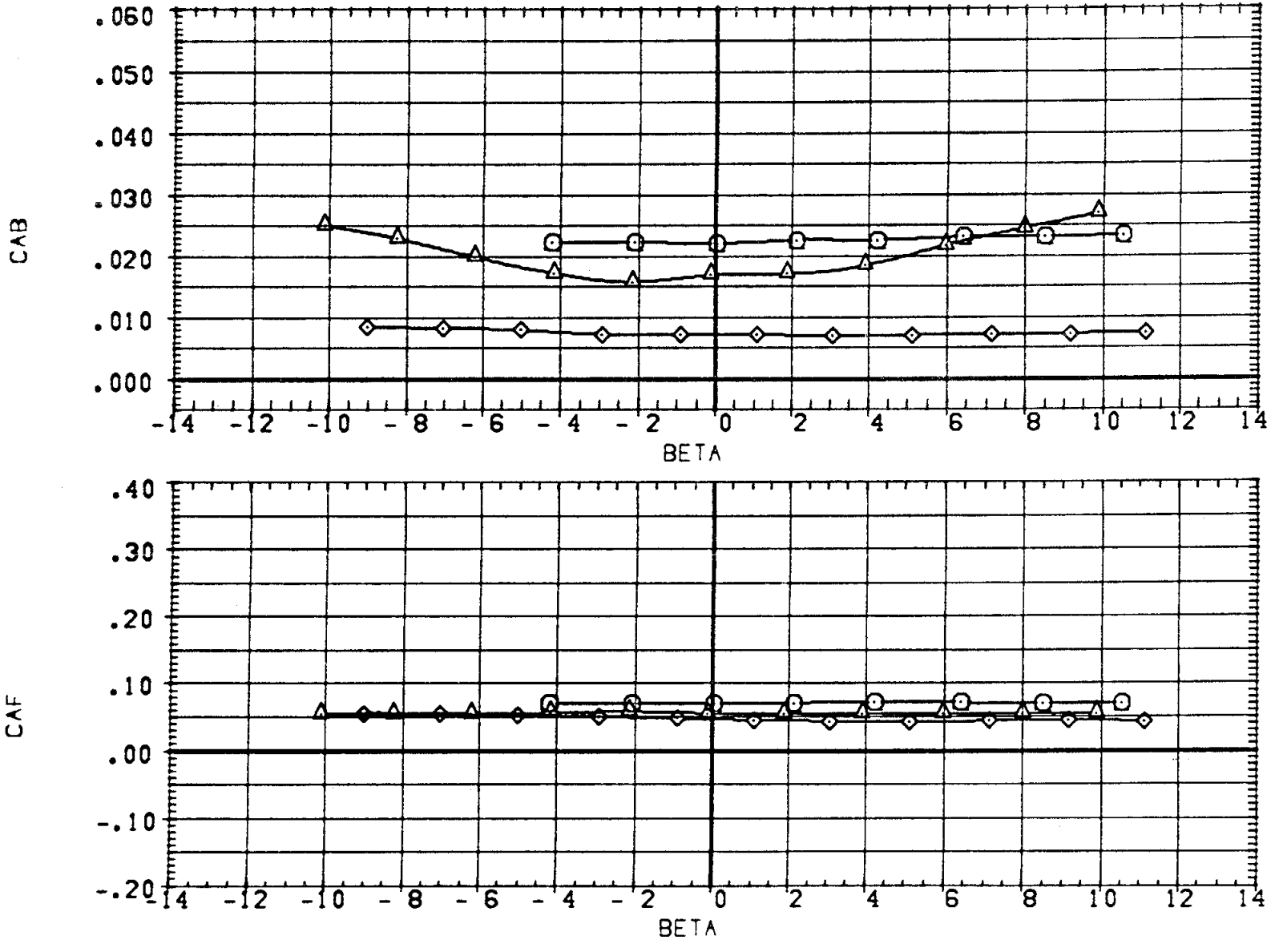
(D)MACH = 1.20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	☒	MSFC 545 (IA1) NAR ATP BL LV-(T5)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1526.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



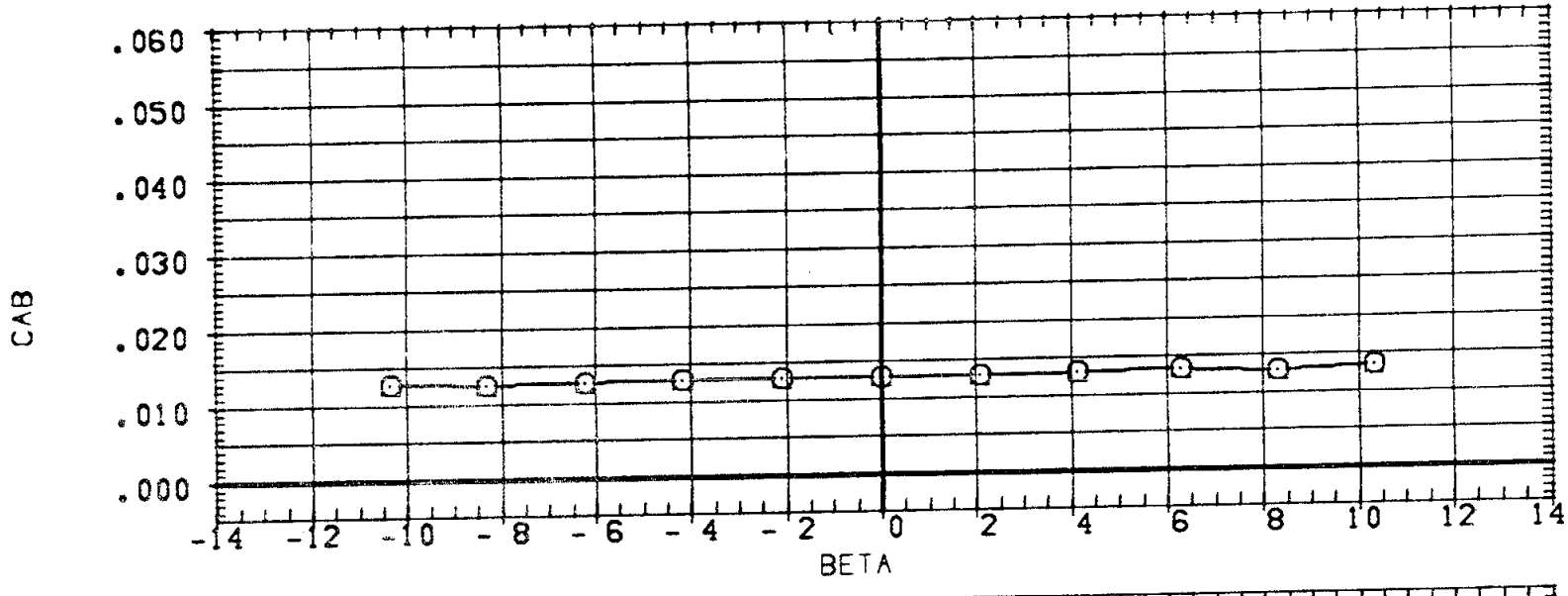
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

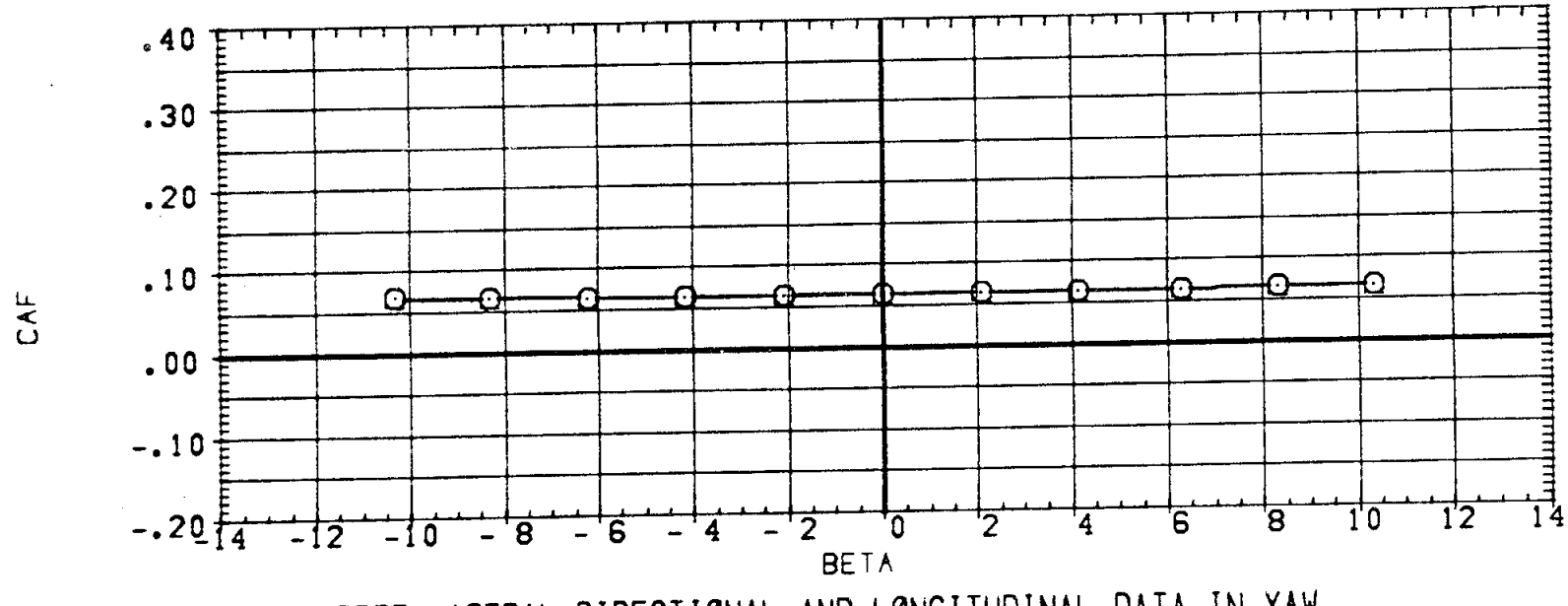
(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72602)	△	DATA NOT AVAILABLE
(A72202)	◇	DATA NOT AVAILABLE

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



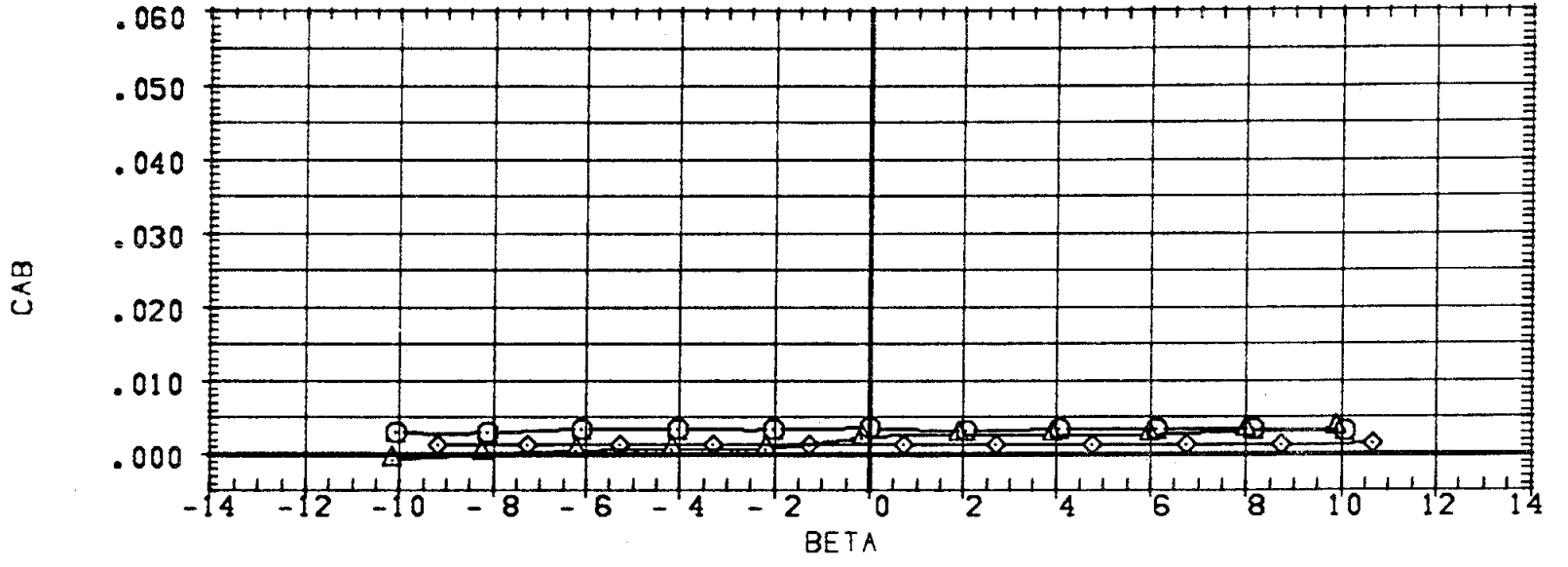


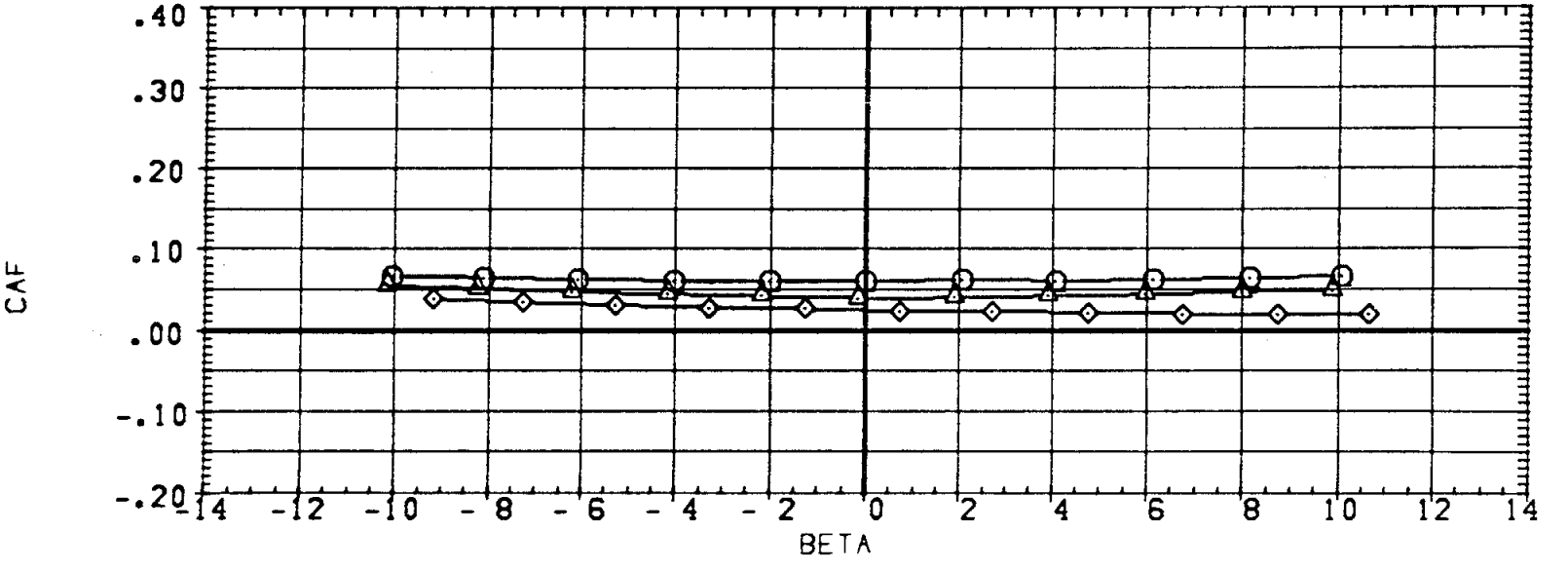
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(G)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





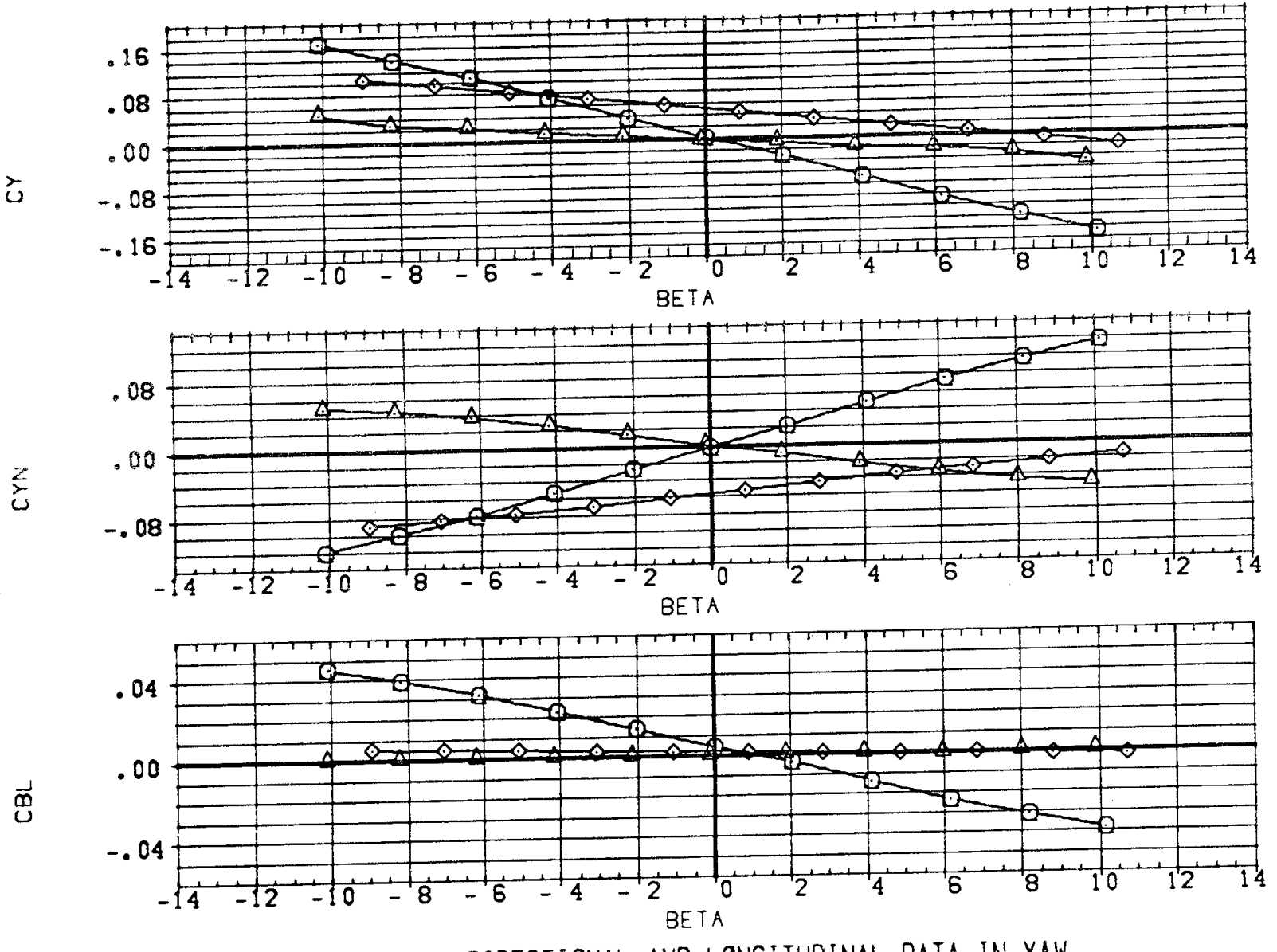
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(H)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

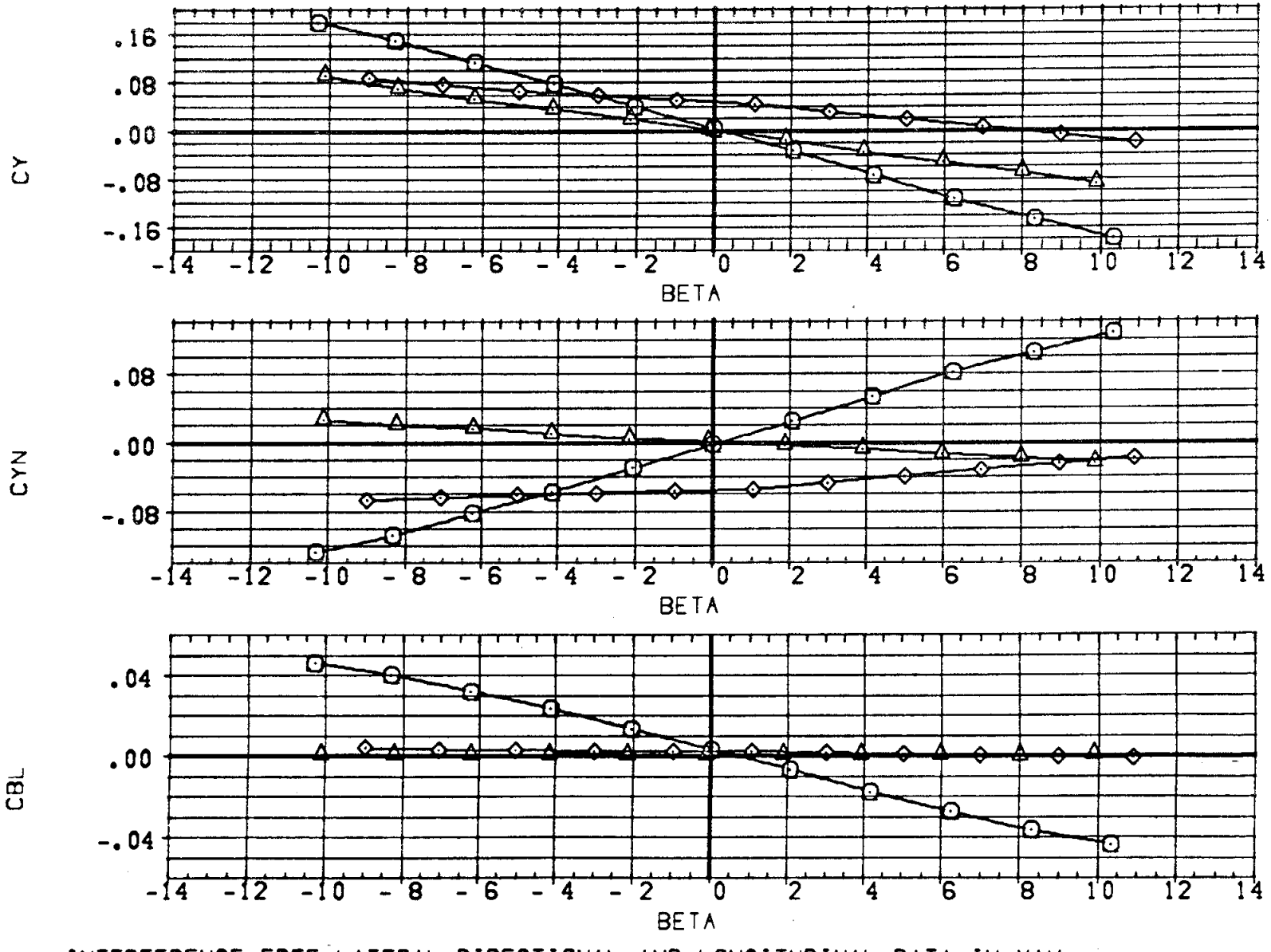


INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T5)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



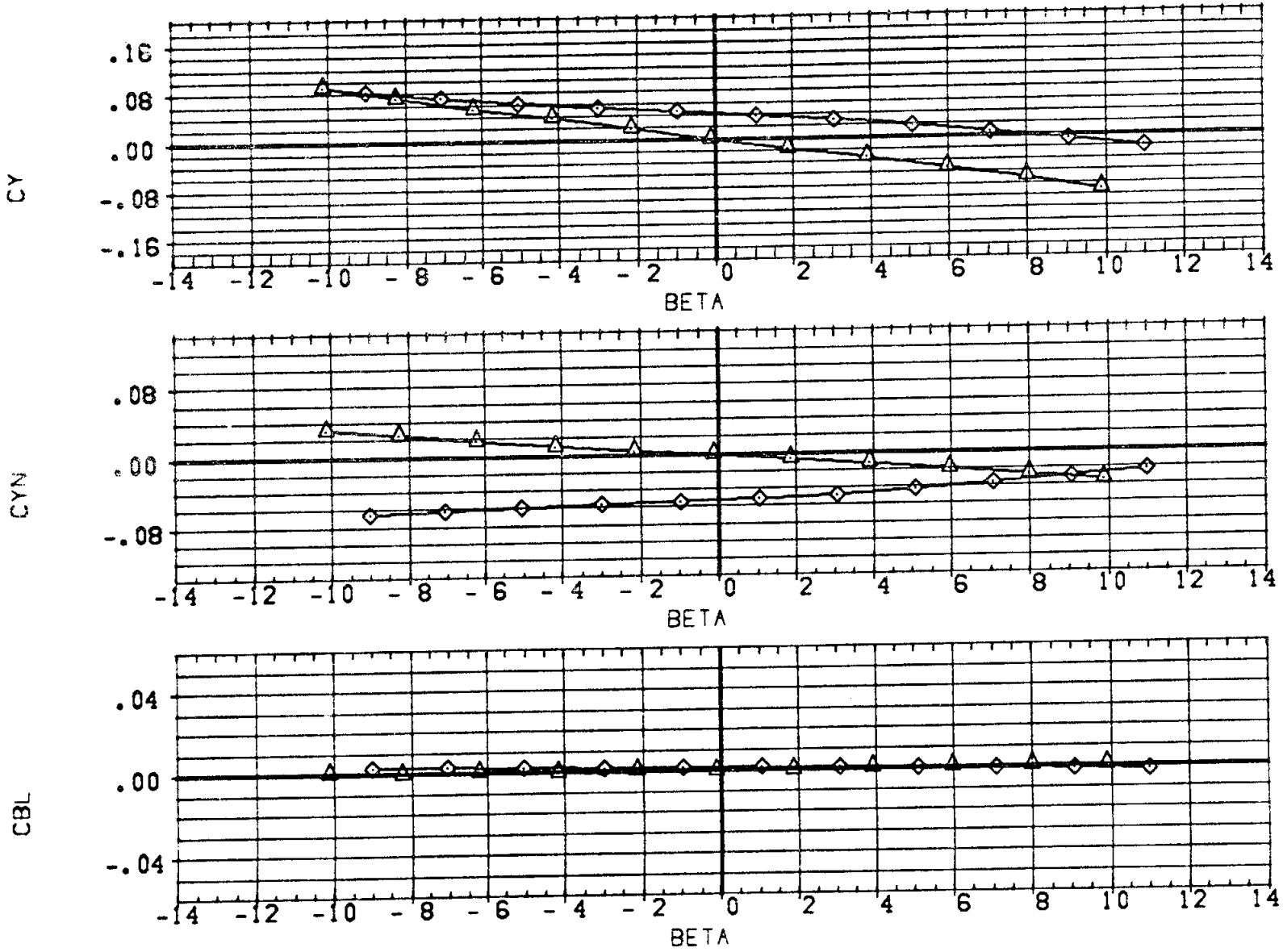
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AP2504)	○	DATA NOT AVAILABLE
(AP2602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(AP2202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



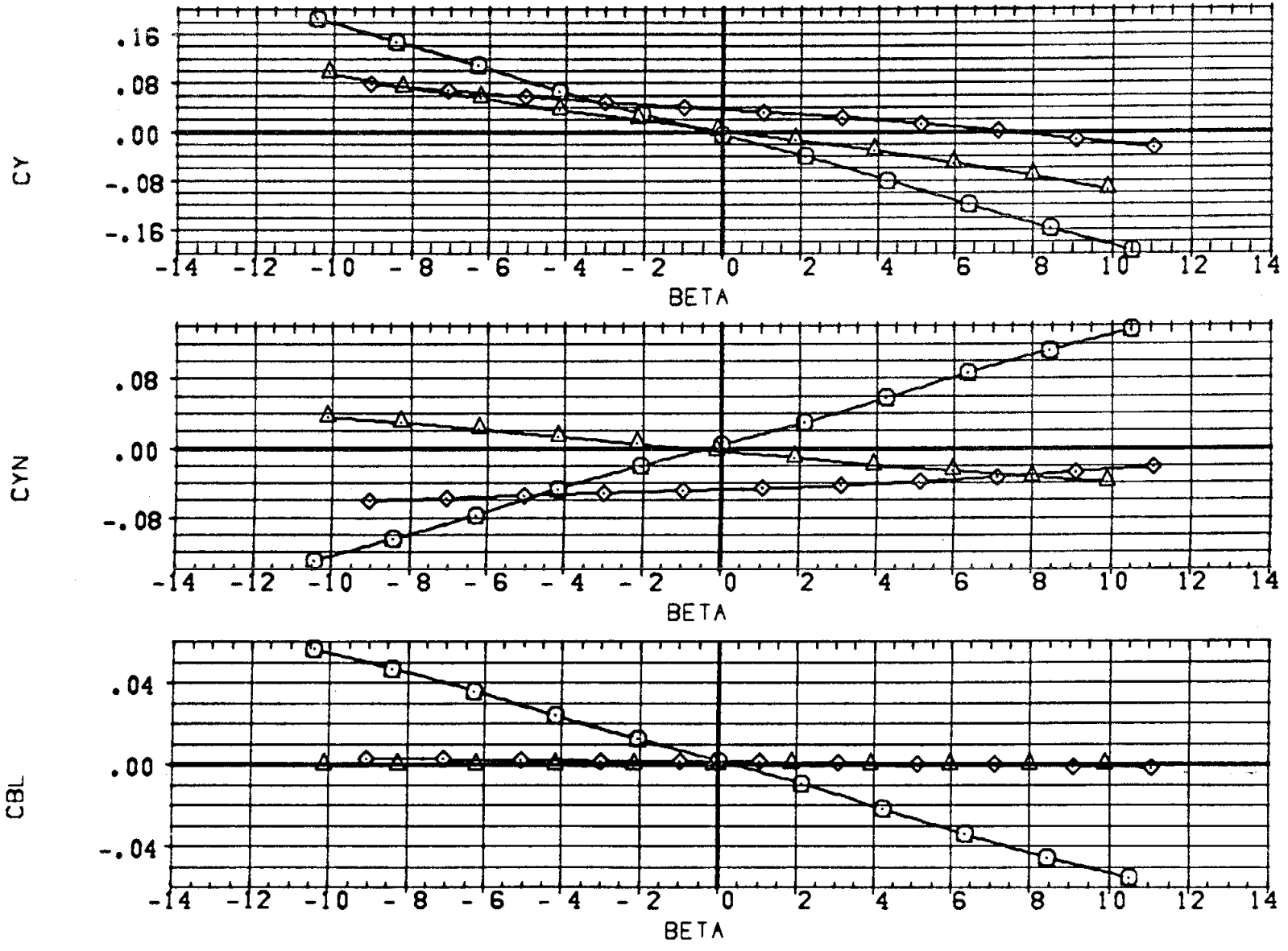
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(01)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



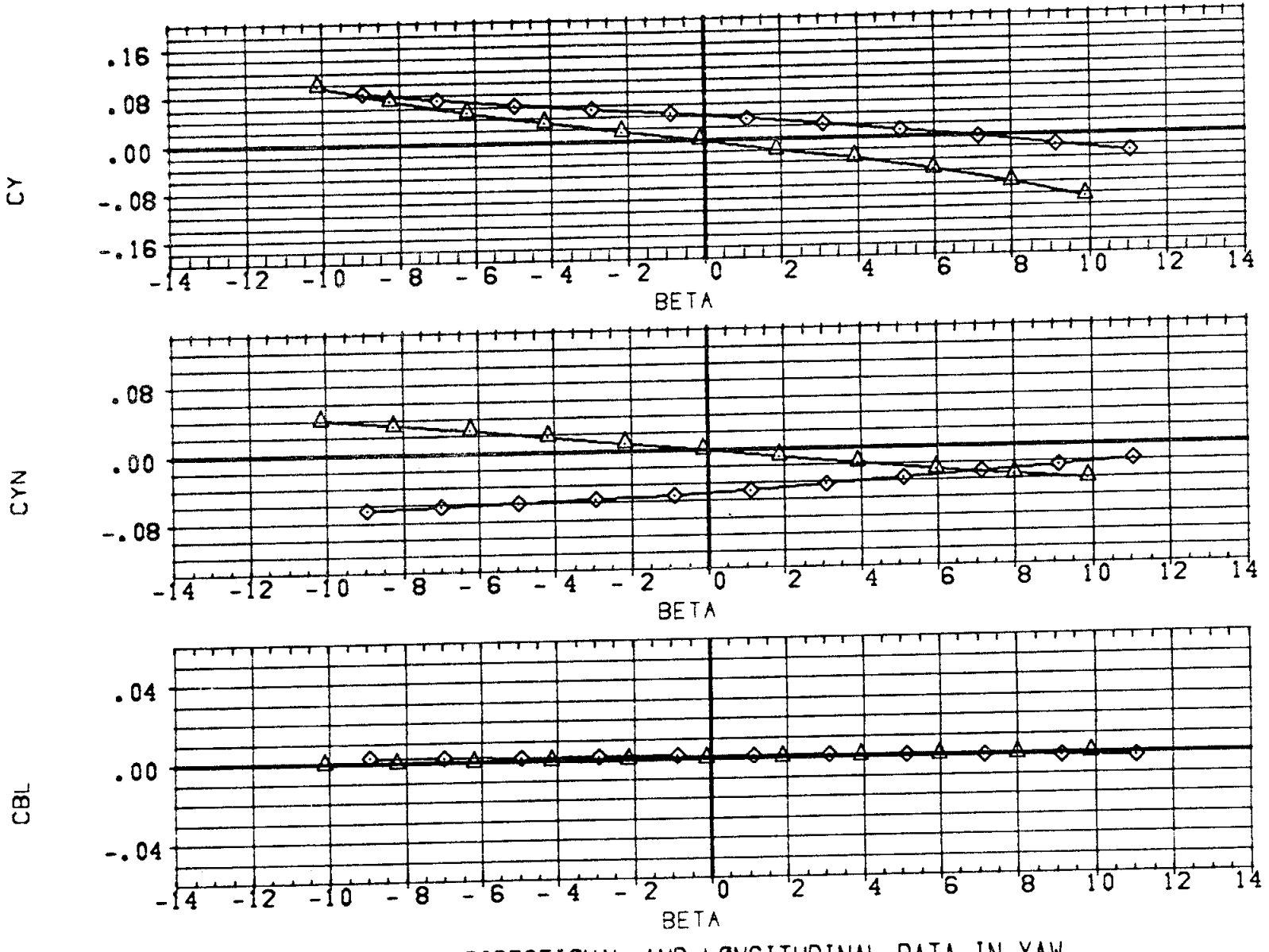
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AY2504)	○	DATA NOT AVAILABLE
(AY2602)	⋈	MSFC 545 (IA1) NAR ATP BL LV-(TS)
(AY2202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



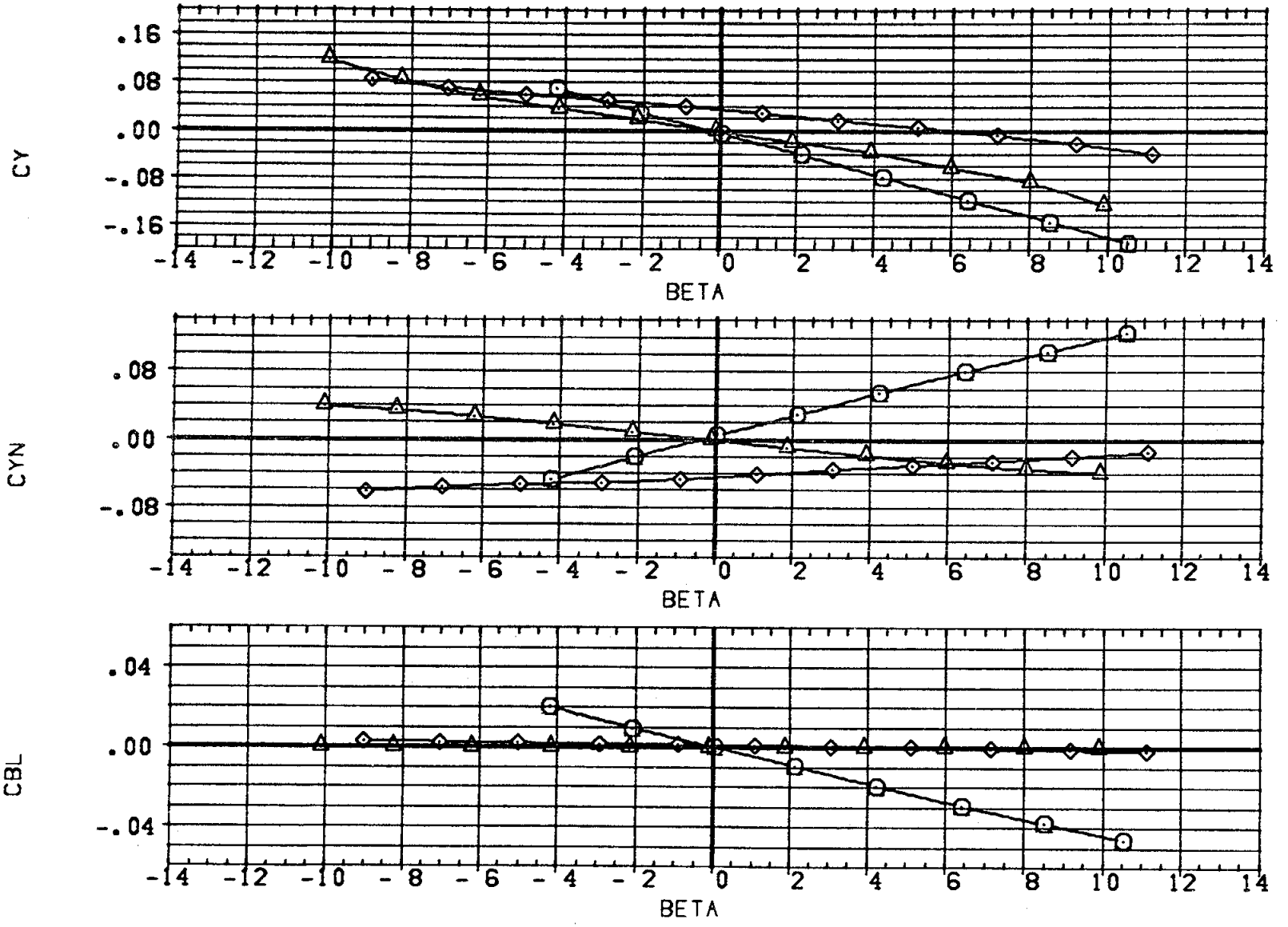
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	⋈	MSFC 545 (IA1) NAR ATP BL LV-(T3)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



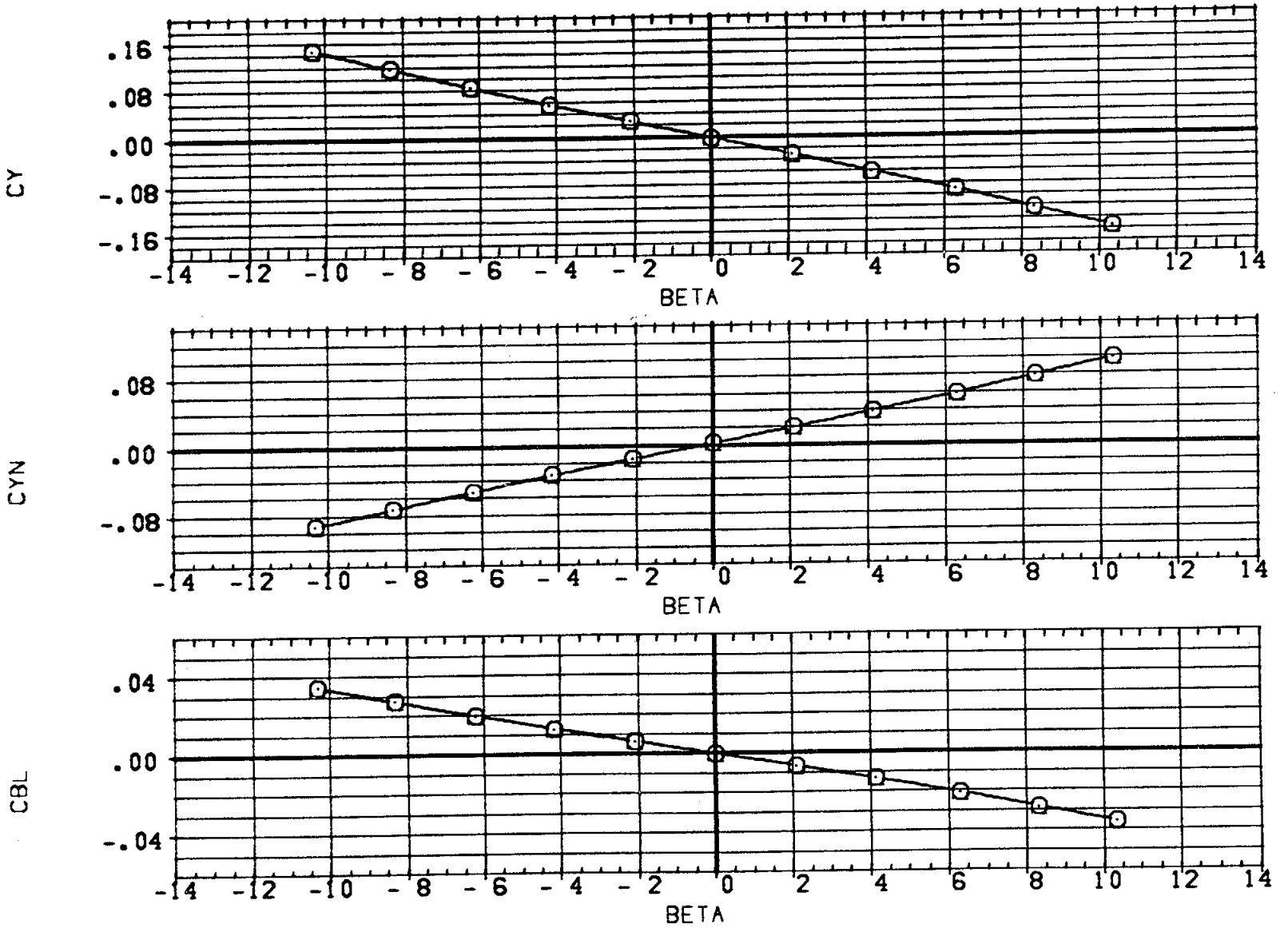
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 945 (IA1) NAR ATP BL ORBITER-(01)
(A72602)	△	DATA NOT AVAILABLE
(A72202)	◇	DATA NOT AVAILABLE

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

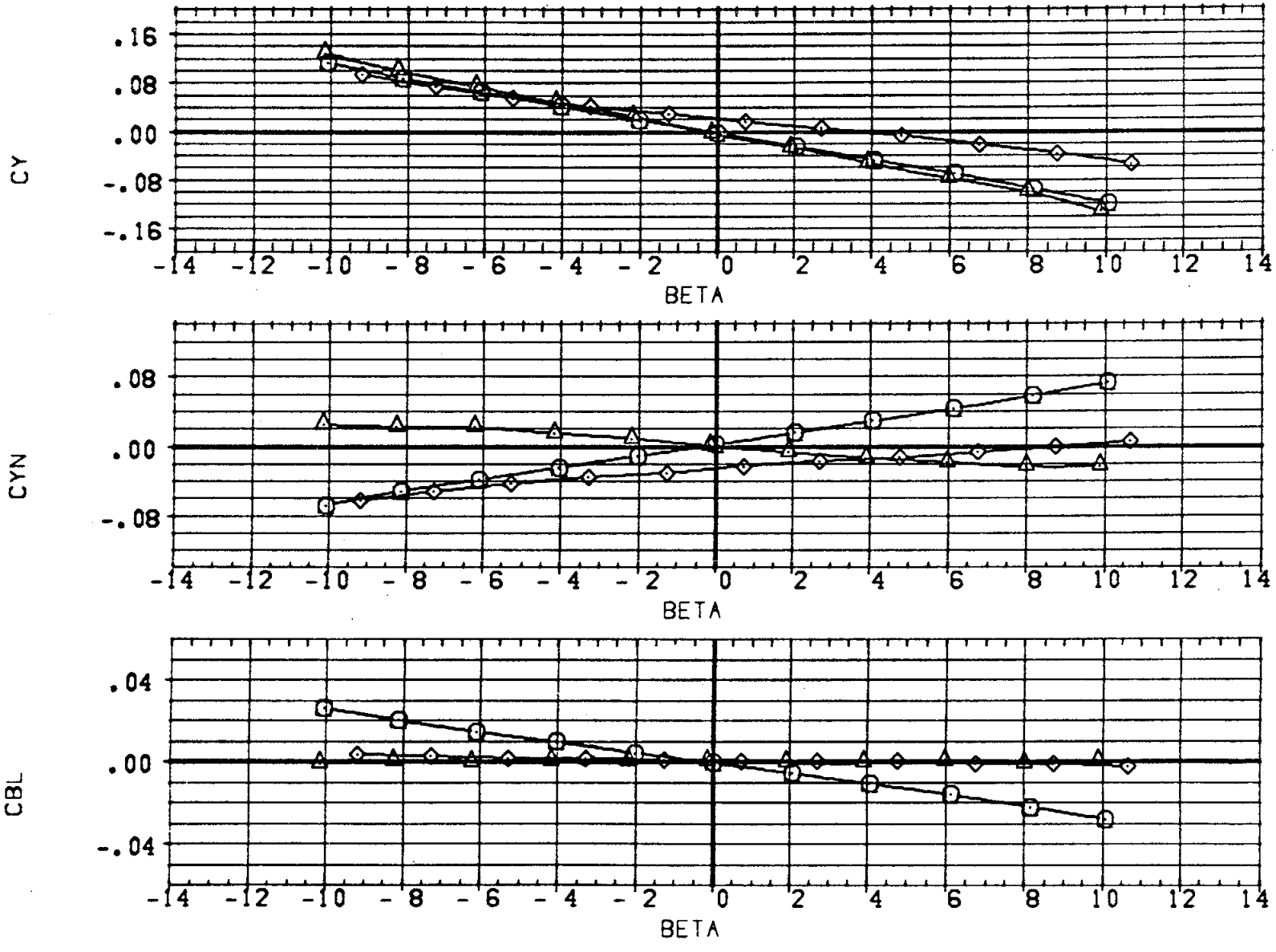


INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(G)MACH = 2.99

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(A72504)	○	MSFC 545 (IA1) NAR ATP BL ORBITER-(O1)
(A72602)	△	MSFC 545 (IA1) NAR ATP BL LV-(T5)
(A72202)	◇	MSFC 545 (IA1) NAR ATP BL SRB-(S1/2)

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



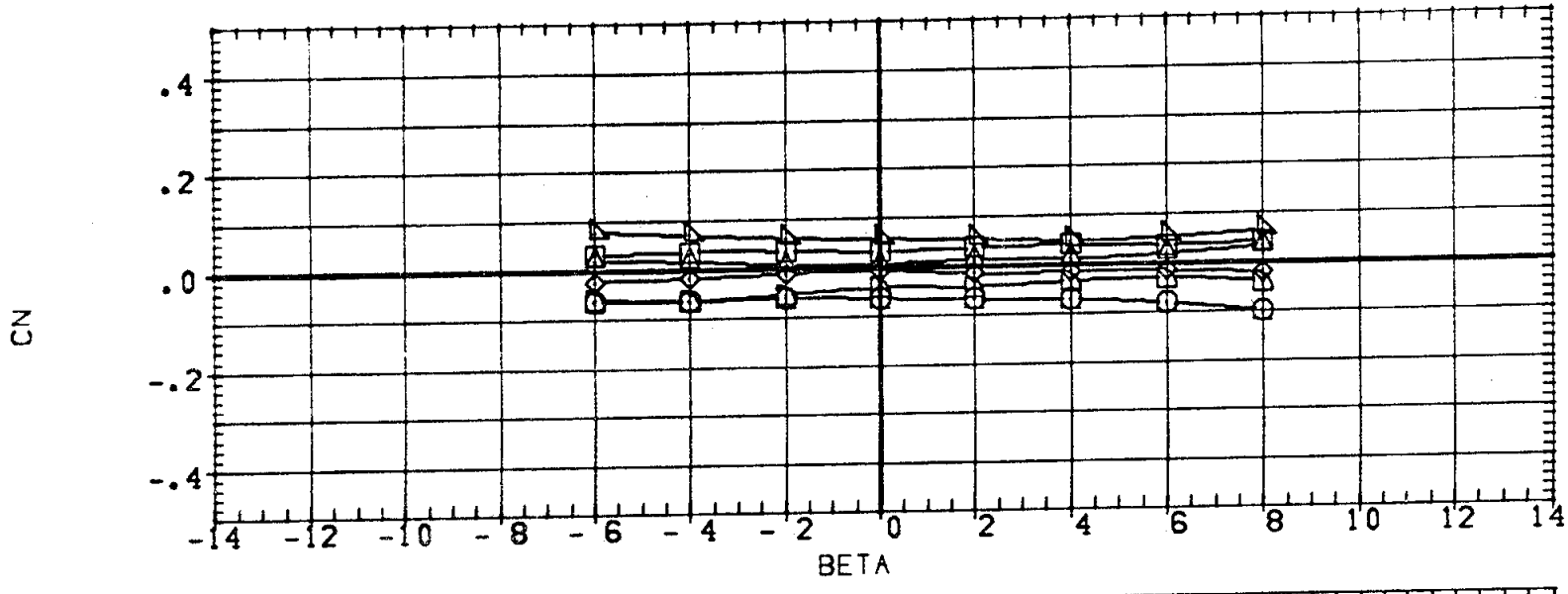
INTERFERENCE FREE LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

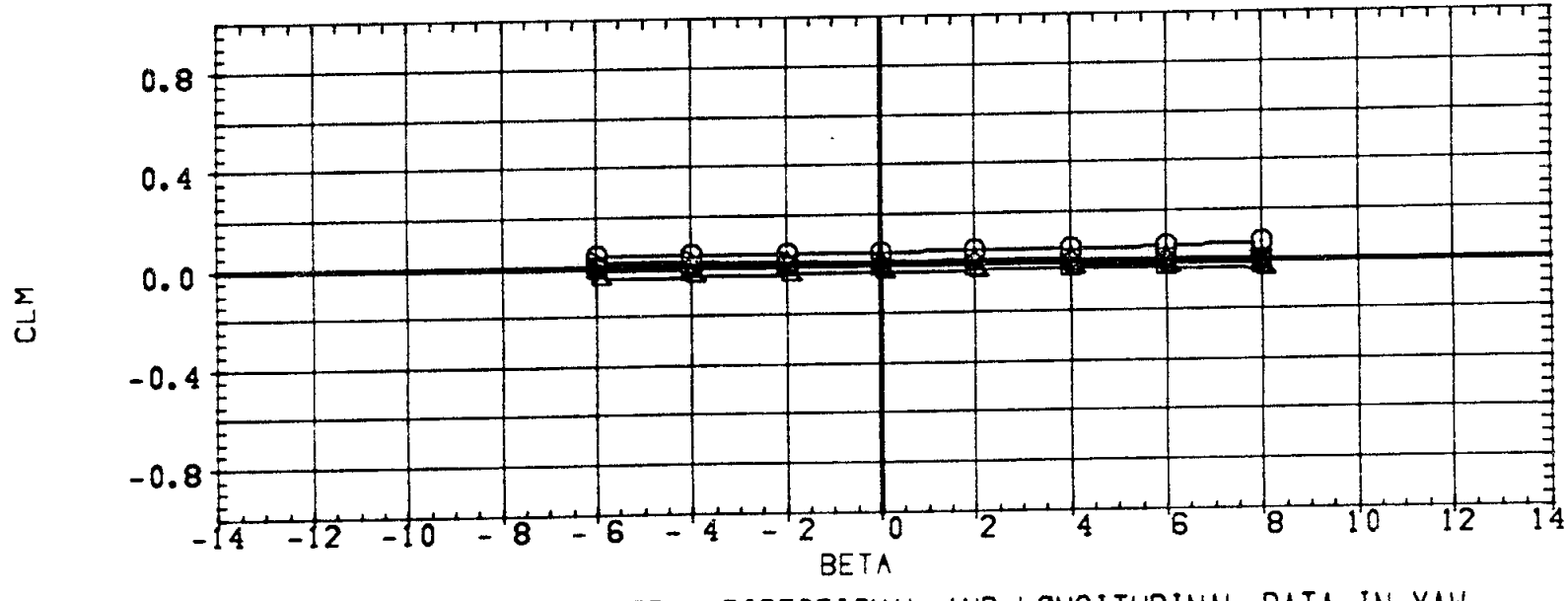
(H)MACH = 4.96

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72EG01)		MSFC 545 (IA1)	TANK ON ORBITER			10.000
(R72HH01)		MSFC 545 (IA1)	ORBITER ON TANK			
(R72JJ02)		MSFC 545 (IA1)	SRB ON TANK	.000	.120	10.000
(R72KK03)		MSFC 545 (IA1)	TANK ON SRB			
(R72LL02)		MSFC 545 (IA1)	SRB ON ORBITER	.000	.120	10.000
(R72MM05)		MSFC 545 (IA1)	ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





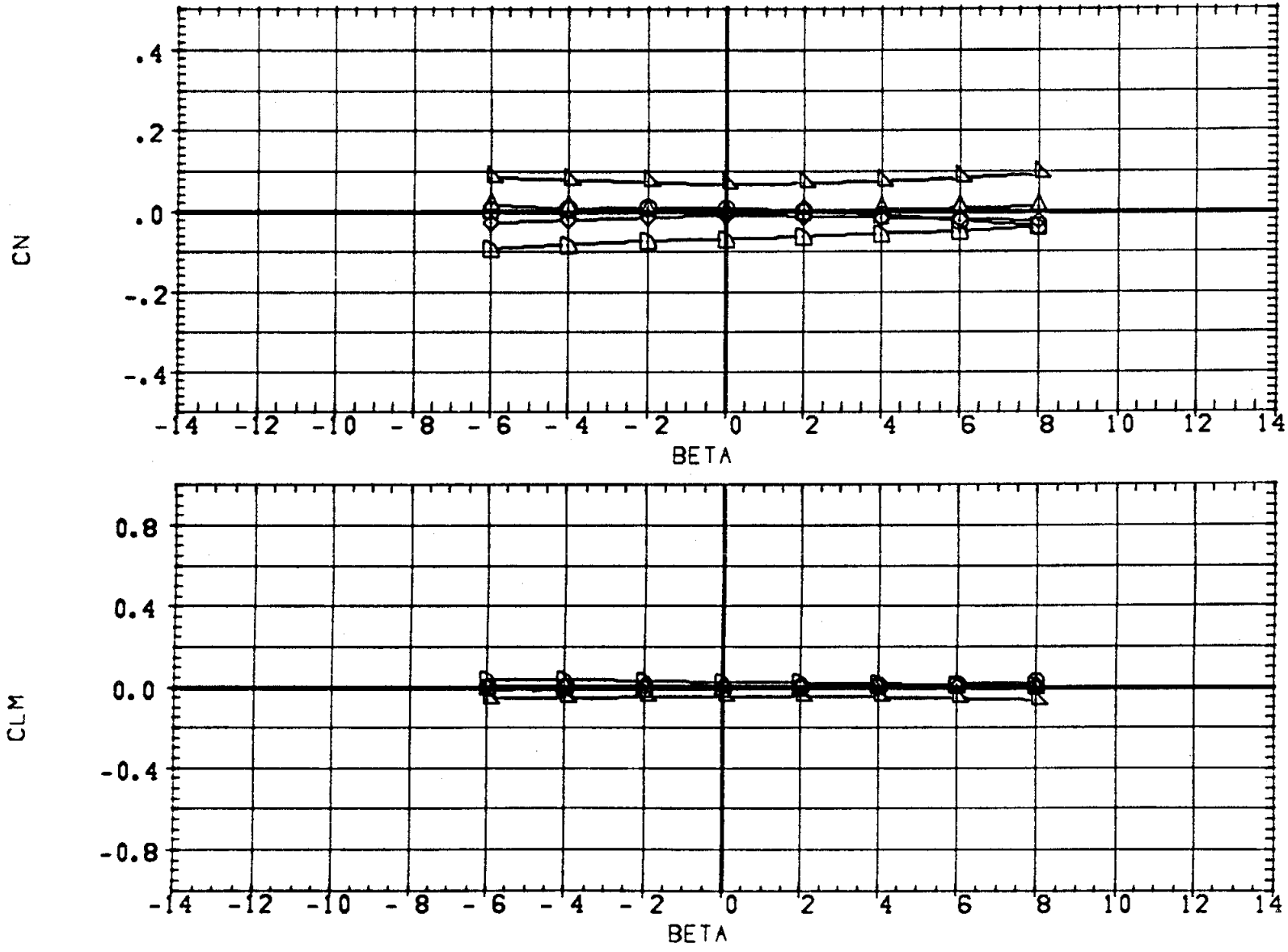
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545 (IA1) TANK ON ORBITER			10.000
(R72H01)		MSFC 545 (IA1) ORBITER ON TANK			
(R72J02)		MSFC 545 (IA1) SRB ON TANK	.000	.120	10.000
(R72K03)		DATA NOT AVAILABLE			
(R72L02)		MSFC 545 (IA1) SRB ON ORBITER	.000	.120	10.000
(R72M05)		MSFC 545 (IA1) ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



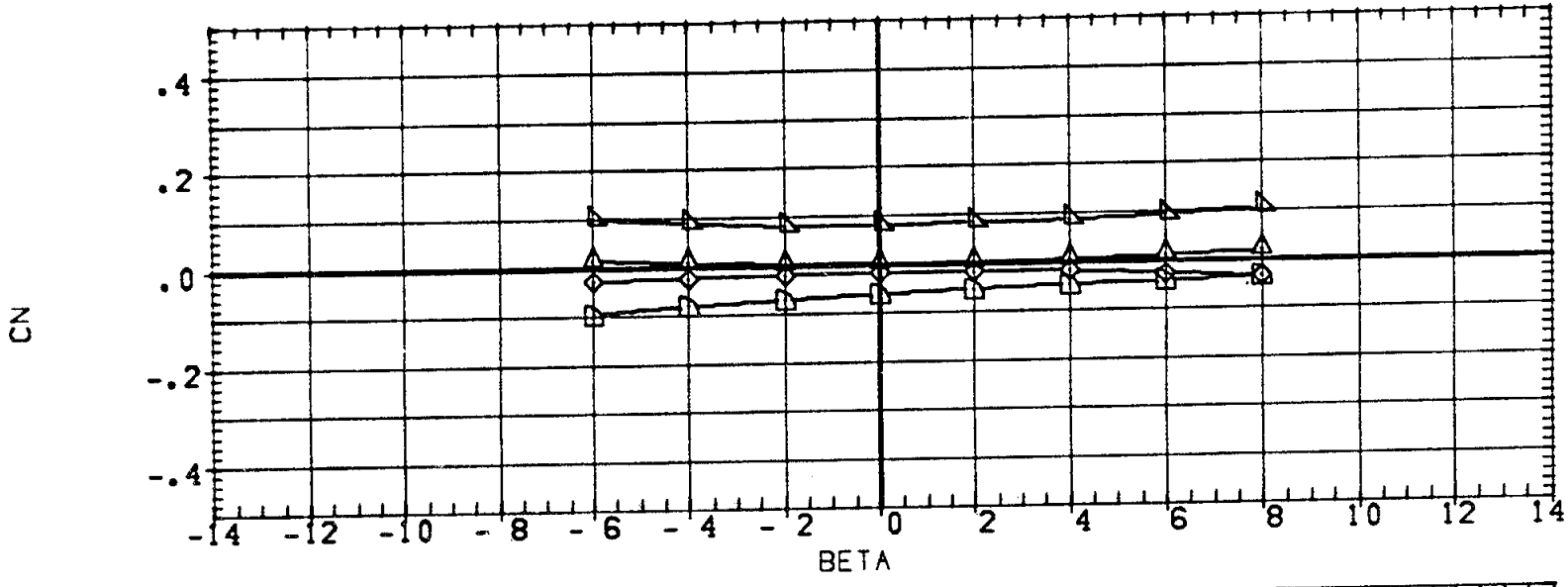
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

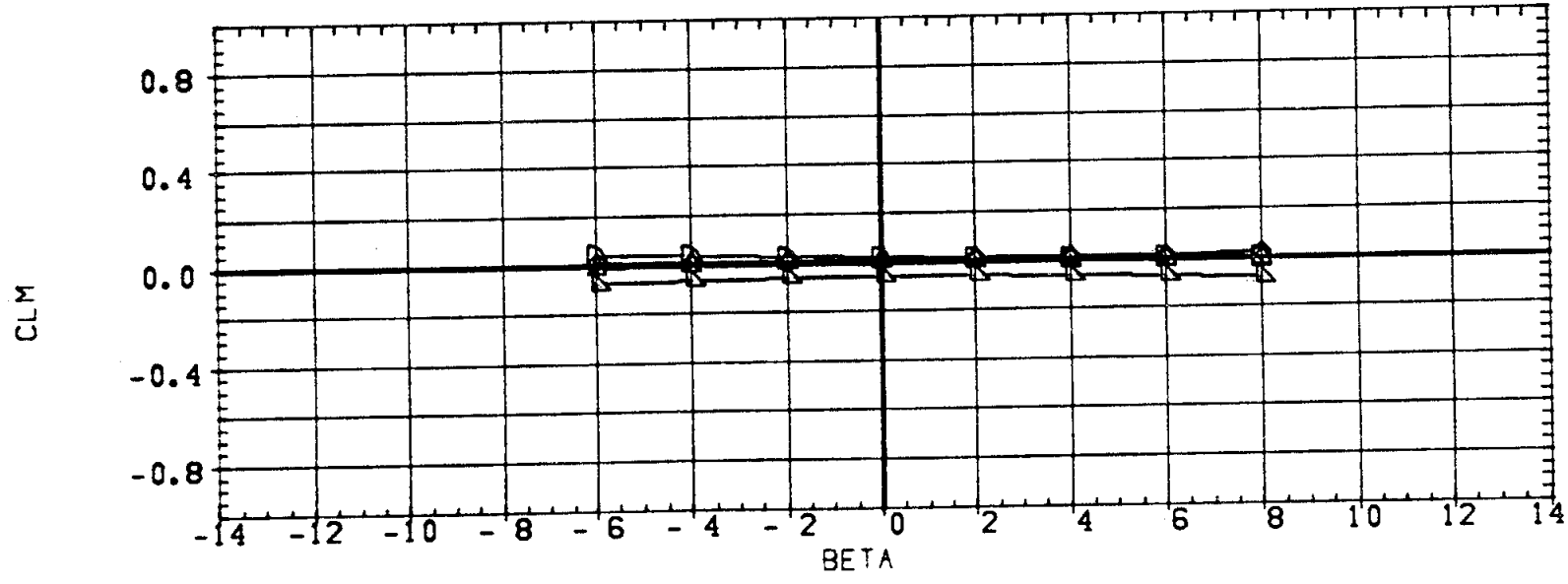
(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(RY2G01)		DATA NOT AVAILABLE			10.000
(RY2H01)		MSFC 545 (1A1) ORBITER ON TANK	.000	.120	10.000
(RY2J02)		MSFC 545 (1A1) SRB ON TANK			
(RY2K03)		DATA NOT AVAILABLE			
(RY2L02)		MSFC 545 (1A1) SRB ON ORBITER	.000	.120	10.000
(RY2H05)		MSFC 545 (1A1) ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





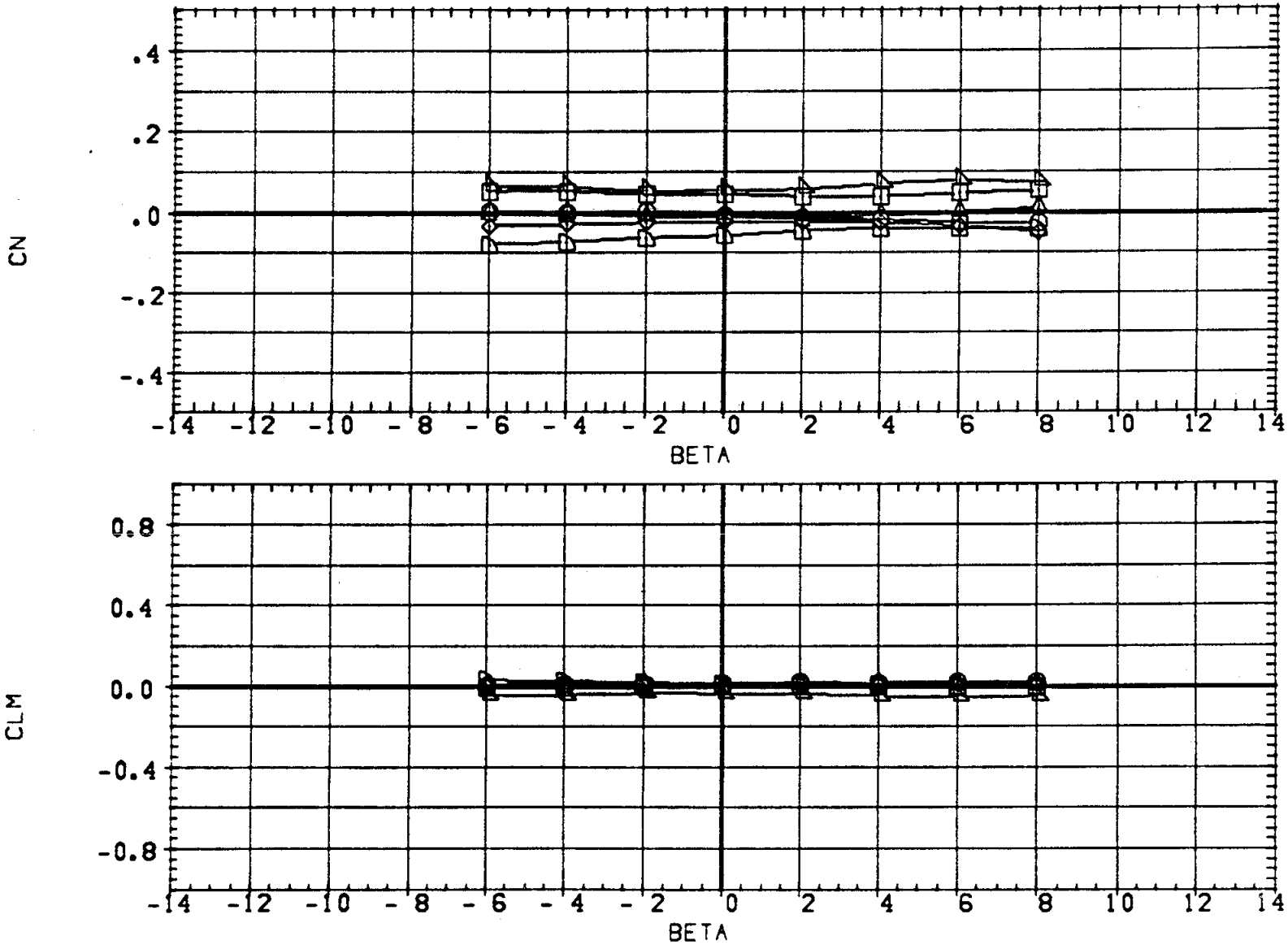
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(C)MACH = 1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545	(IA1)	TANK ON ORBITER			10.000
(R72H01)		MSFC 545	(IA1)	ORBITER ON TANK			
(R72J02)		MSFC 545	(IA1)	SRB ON TANK	.000	.120	10.000
(R72K03)		MSFC 545	(IA1)	TANK ON SRB			
(R72L02)		MSFC 545	(IA1)	SRB ON ORBITER	.000	.120	10.000
(R72M05)		MSFC 545	(IA1)	ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



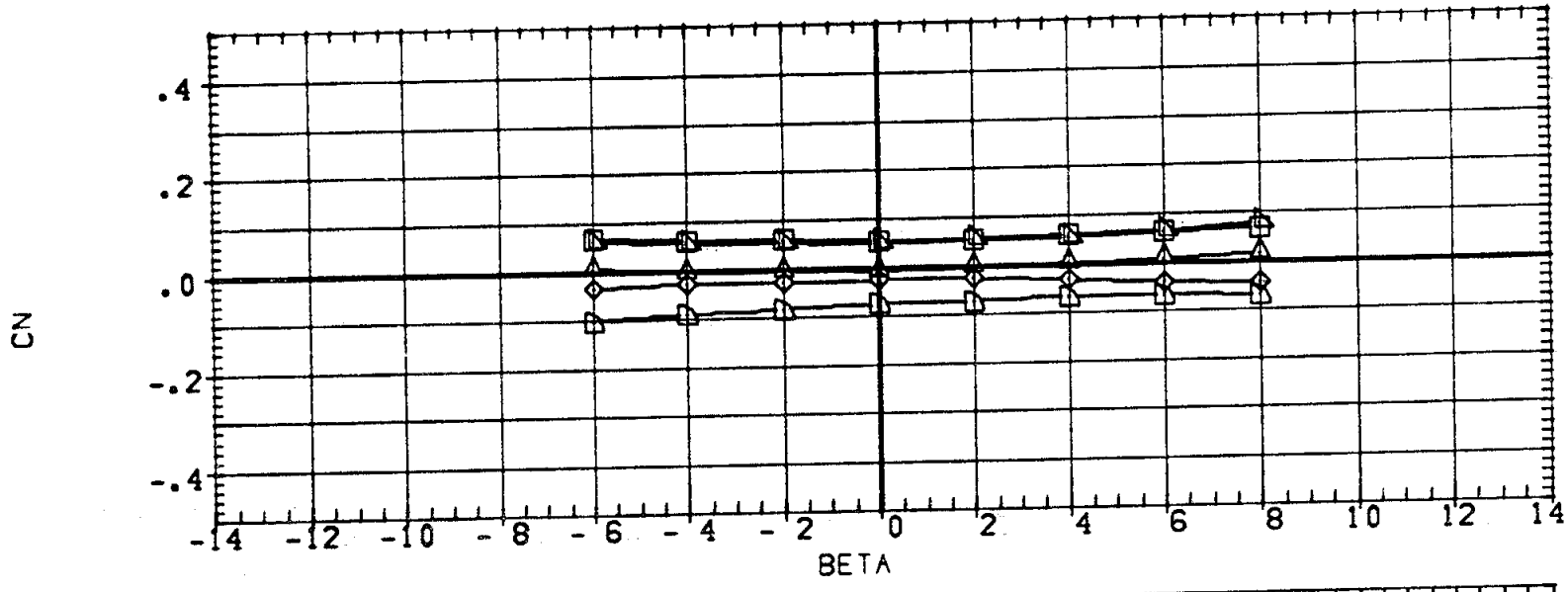
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

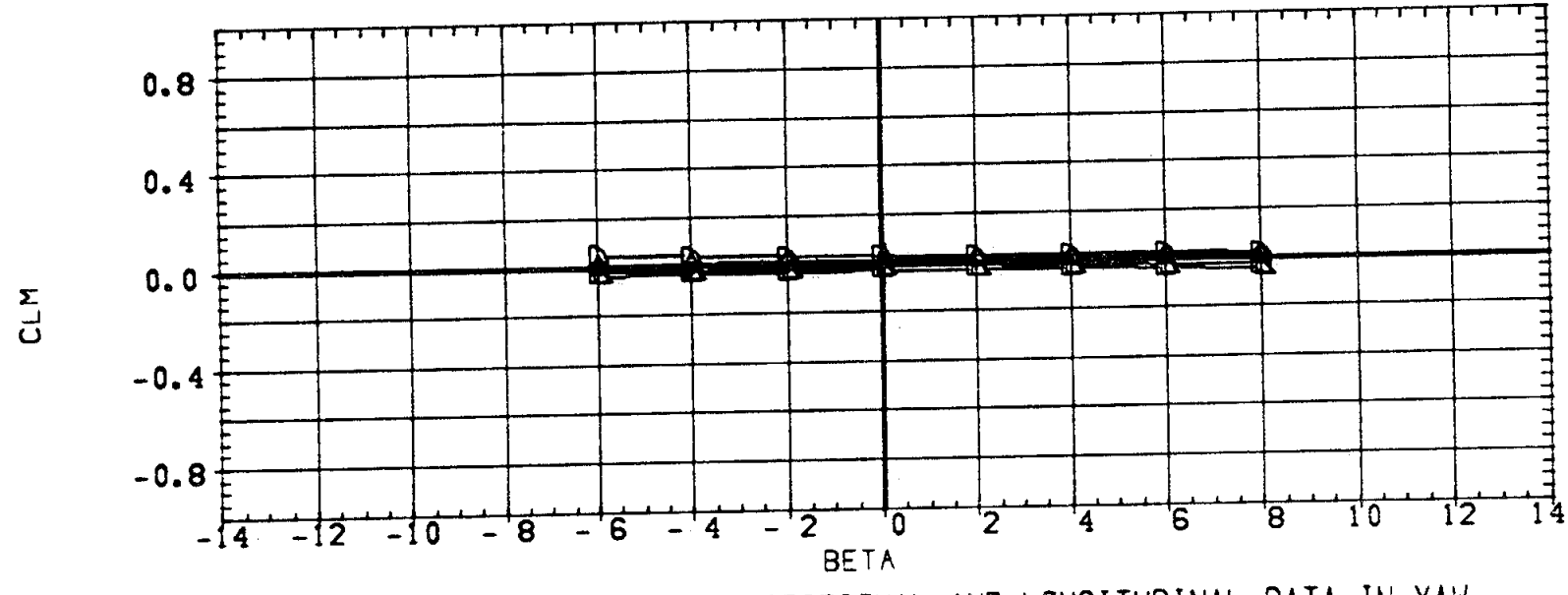
(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ORBINC	DELTAZ	RUDFLR
(R72G01)		DATA NOT AVAILABLE				10.000
(R72H01)	◇	MSFC 545 (IA1)	ORBITER ON TANK	.000	.120	10.000
(R72J02)	△	MSFC 545 (IA1)	SRB ON TANK			
(R72K03)	□	MSFC 545 (IA1)	TANK ON SRB	.000	.120	10.000
(R72L02)	◇	MSFC 545 (IA1)	SRB ON ORBITER			
(R72M05)	△□◇○	MSFC 545 (IA1)	ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





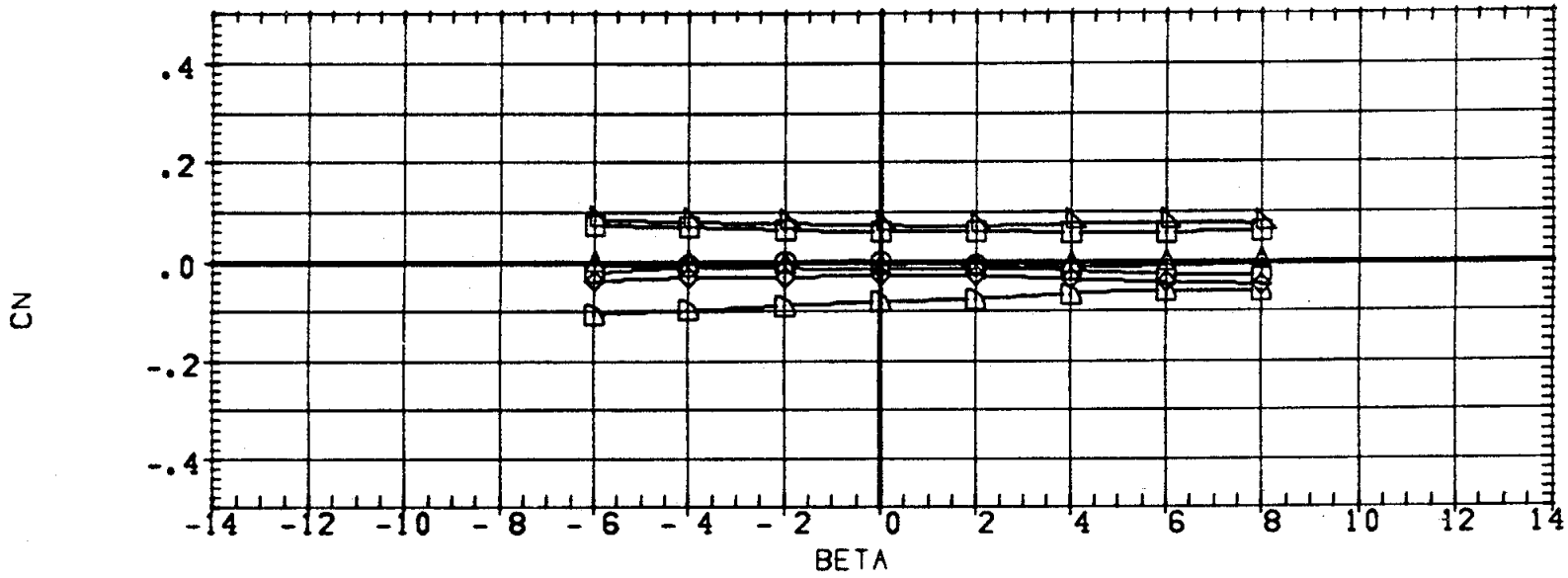
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

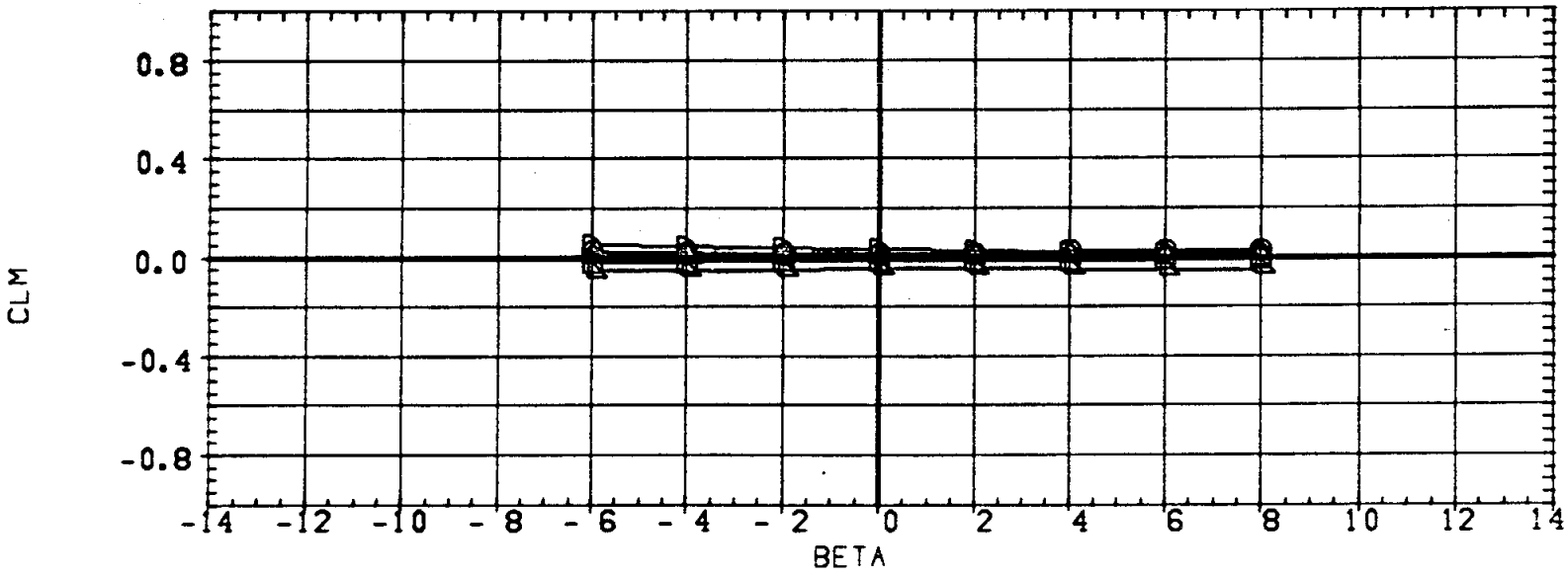
(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545 (IA1)	TANK ON ORBITER			10.000
(R72H01)		MSFC 545 (IA1)	ORBITER ON TANK			
(R72J02)		MSFC 545 (IA1)	SRB ON TANK	.000	.120	10.000
(R72K03)		MSFC 545 (IA1)	TANK ON SRB			
(R72L02)		MSFC 545 (IA1)	SRB ON ORBITER	.000	.120	10.000
(R72M03)		MSFC 545 (IA1)	ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





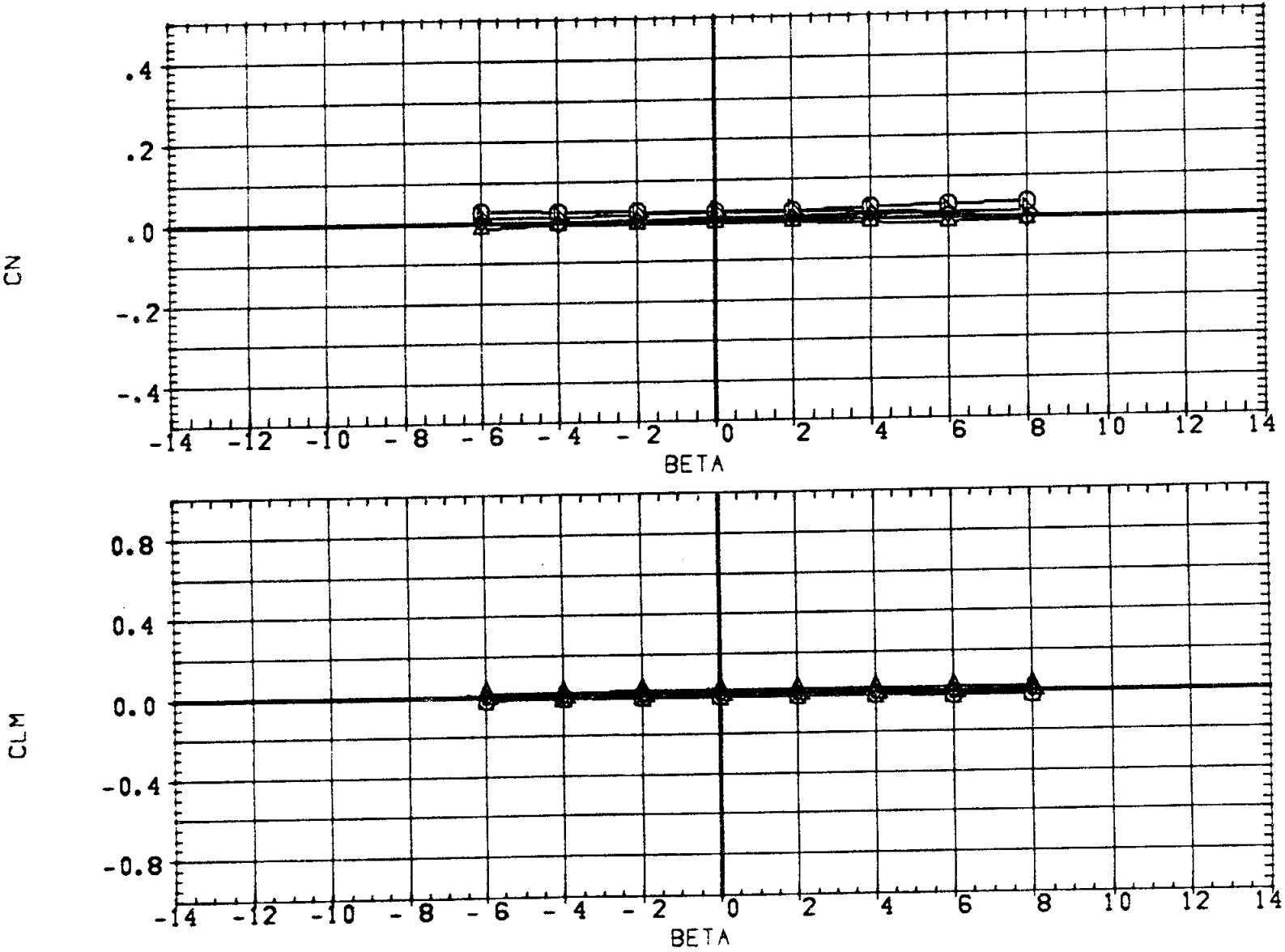
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(F)MACH = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545 (IA1) TANK ON ORBITER			10.000
(R72H01)		MSFC 545 (IA1) ORBITER ON TANK	.000	.120	10.000
(R72J02)		MSFC 545 (IA1) SRB ON TANK			
(R72K03)		DATA NOT AVAILABLE	.000	.120	10.000
(R72L02)		MSFC 545 (IA1) SRB ON ORBITER			
(R72M05)		DATA NOT AVAILABLE			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



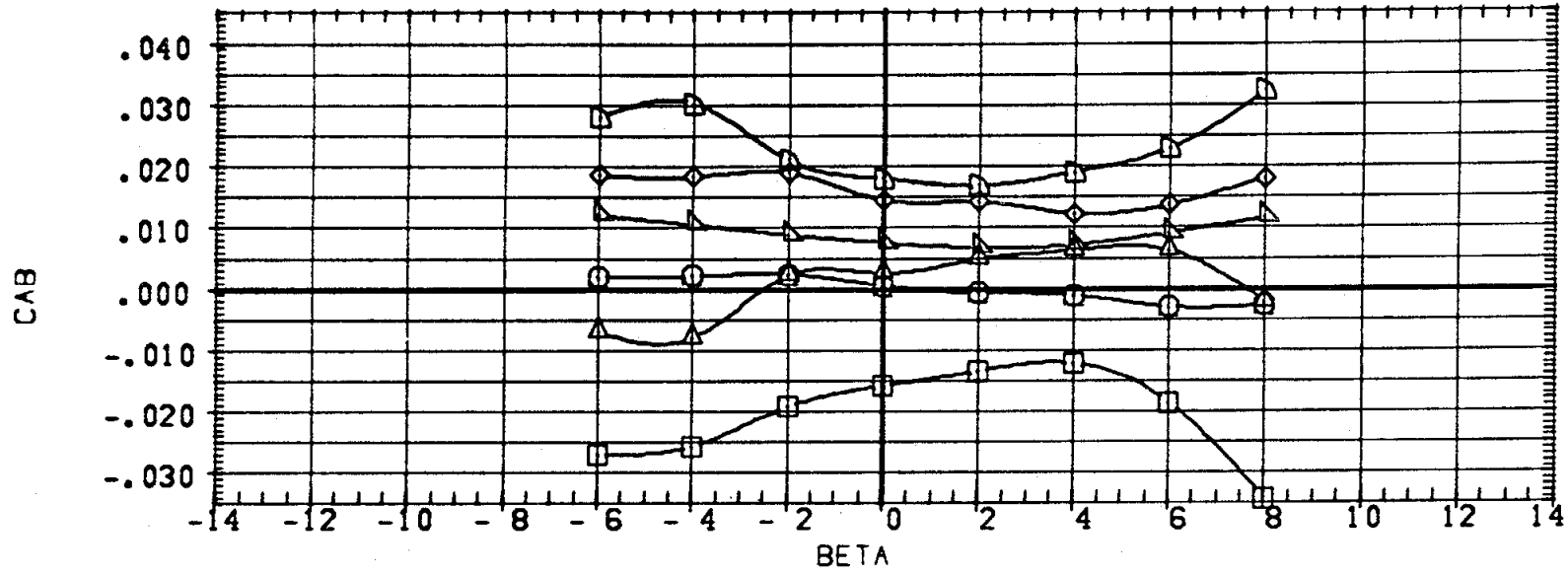
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

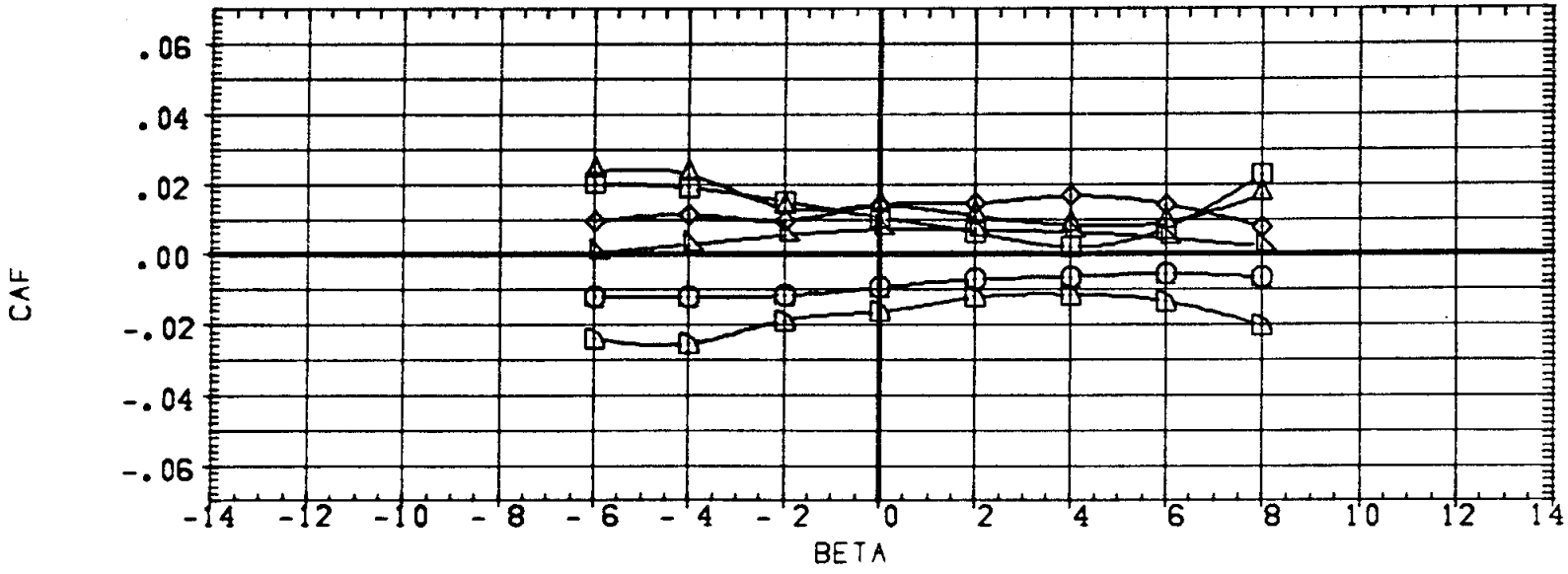
(G)MAC = 4.96

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)	○	MSFC 545 (IA1)	TANK ON ORBITER			10.000
(R72H01)	◇	MSFC 545 (IA1)	ORBITER ON TANK			
(R72J02)	△	MSFC 545 (IA1)	SRB ON TANK	.000	.120	10.000
(R72K03)	□	MSFC 545 (IA1)	TANK ON SRB			
(R72L02)	▽	MSFC 545 (IA1)	SRB ON ORBITER	.000	.120	10.000
(R72M03)	⬠	MSFC 545 (IA1)	ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





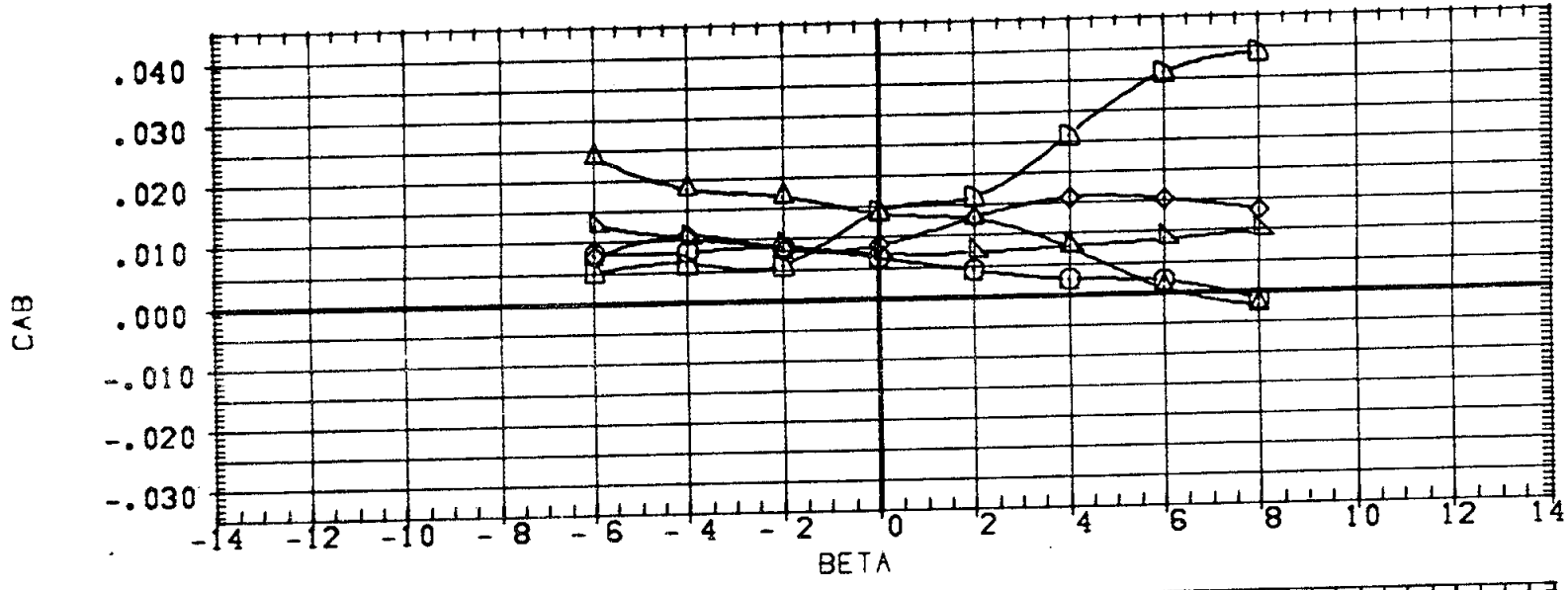
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

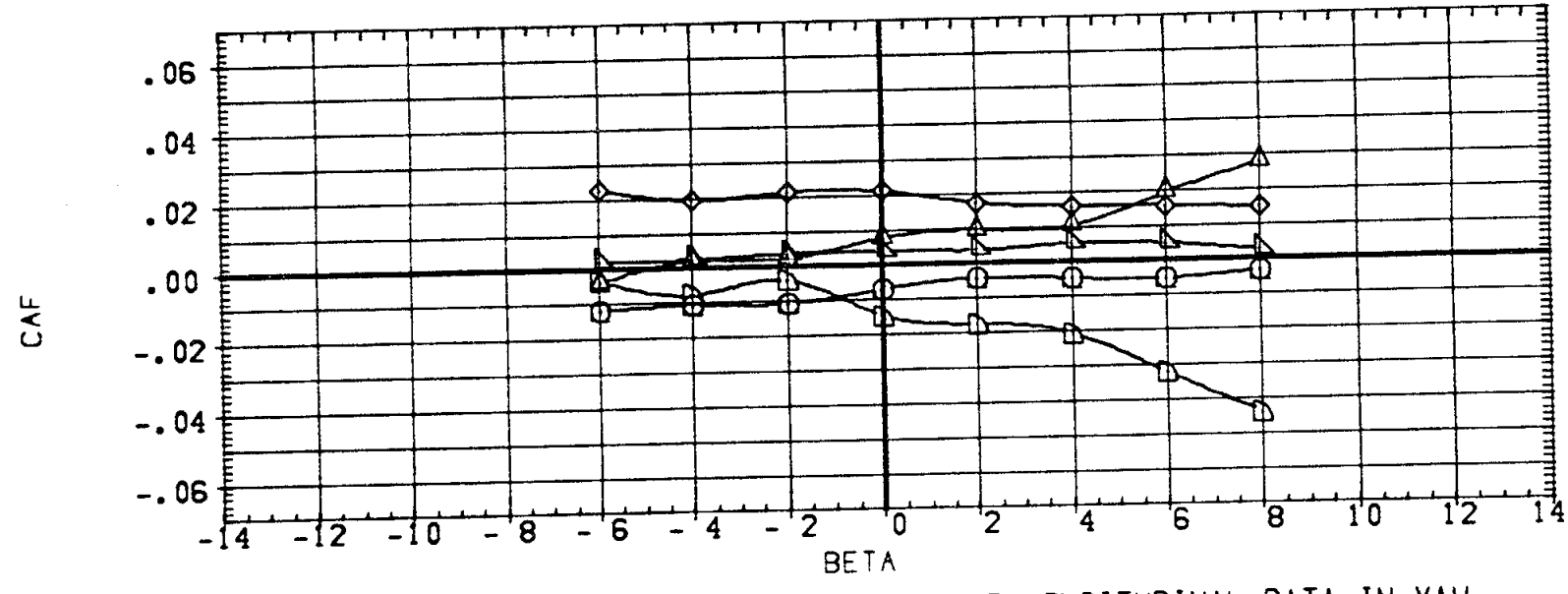
(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545 (IA1) TANK ON ORBITER			10.000
(R72H01)		MSFC 545 (IA1) ORBITER ON TANK	.000	.120	10.000
(R72J02)		MSFC 545 (IA1) SRB ON TANK			
(R72K03)		DATA NOT AVAILABLE	.000	.120	10.000
(R72L02)		MSFC 545 (IA1) SRB ON ORBITER			
(R72M05)		MSFC 545 (IA1) ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





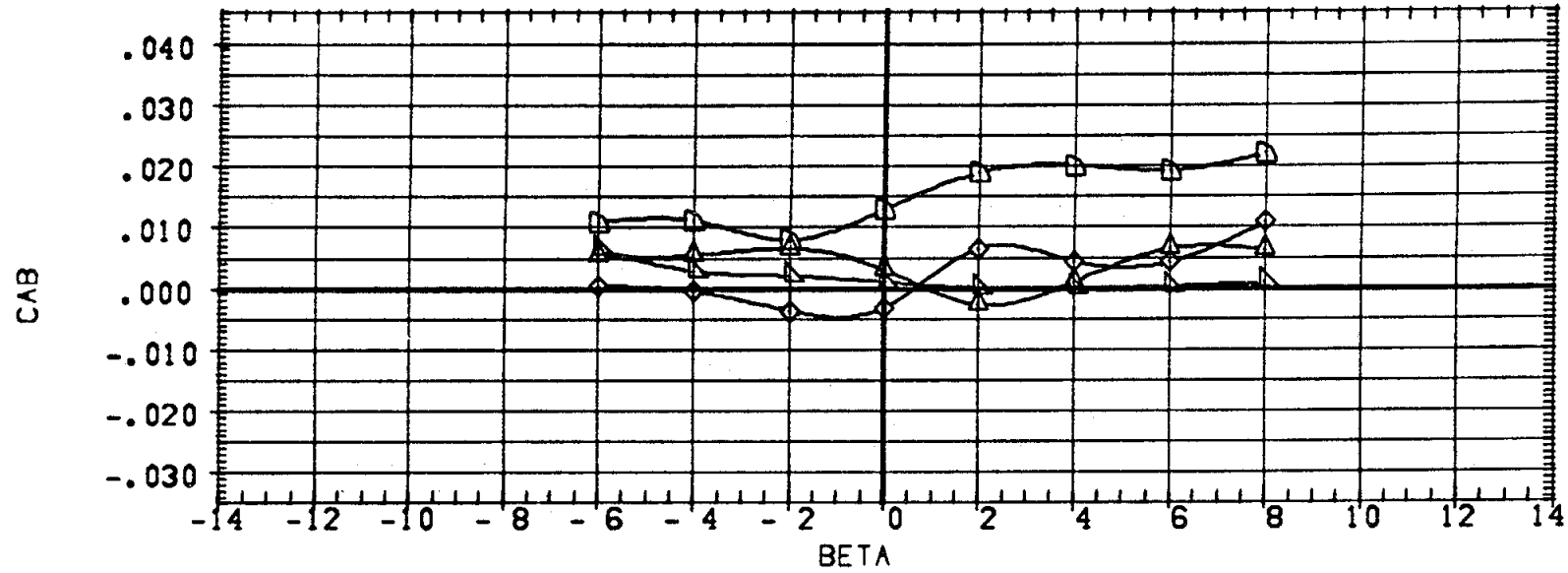
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

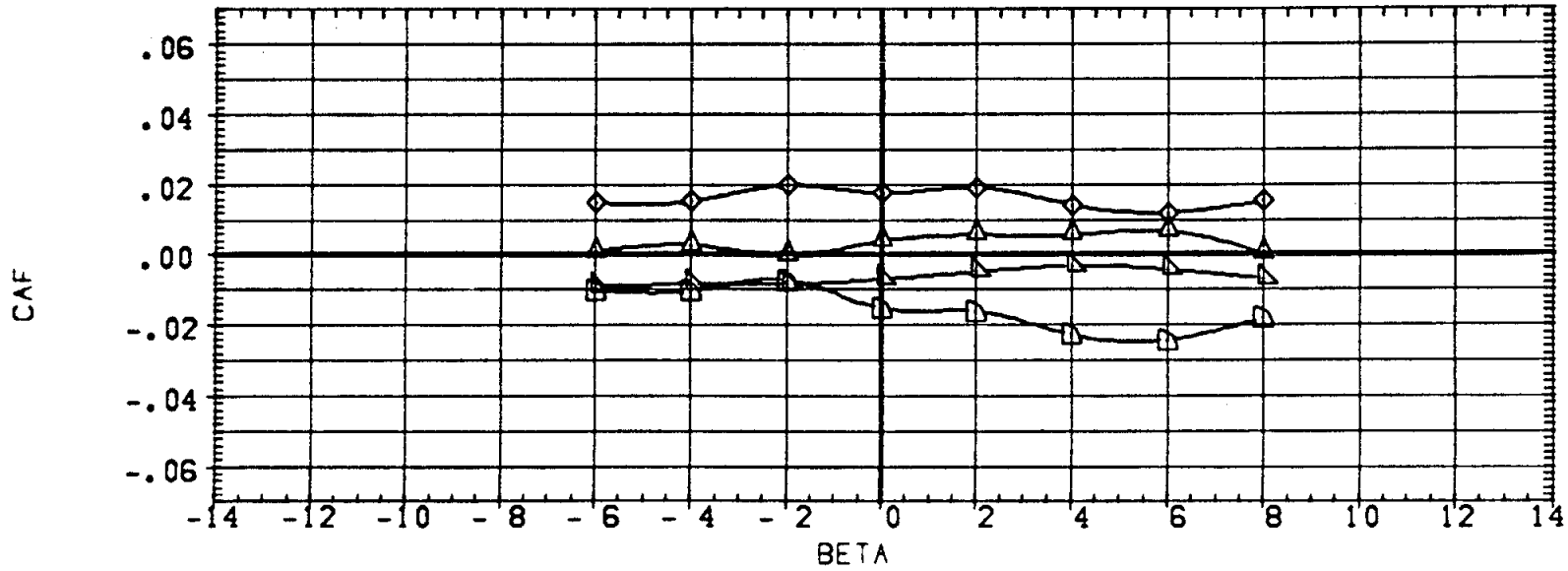
(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		DATA NOT AVAILABLE			10.000
(R72H01)		MSFC 545 (IA1) ORBITER ON TANK			
(R72J02)		MSFC 545 (IA1) SRB ON TANK	.000	.120	10.000
(R72K03)		DATA NOT AVAILABLE			
(R72L02)		MSFC 545 (IA1) SRB ON ORBITER	.000	.120	10.000
(R72M05)		MSFC 545 (IA1) ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

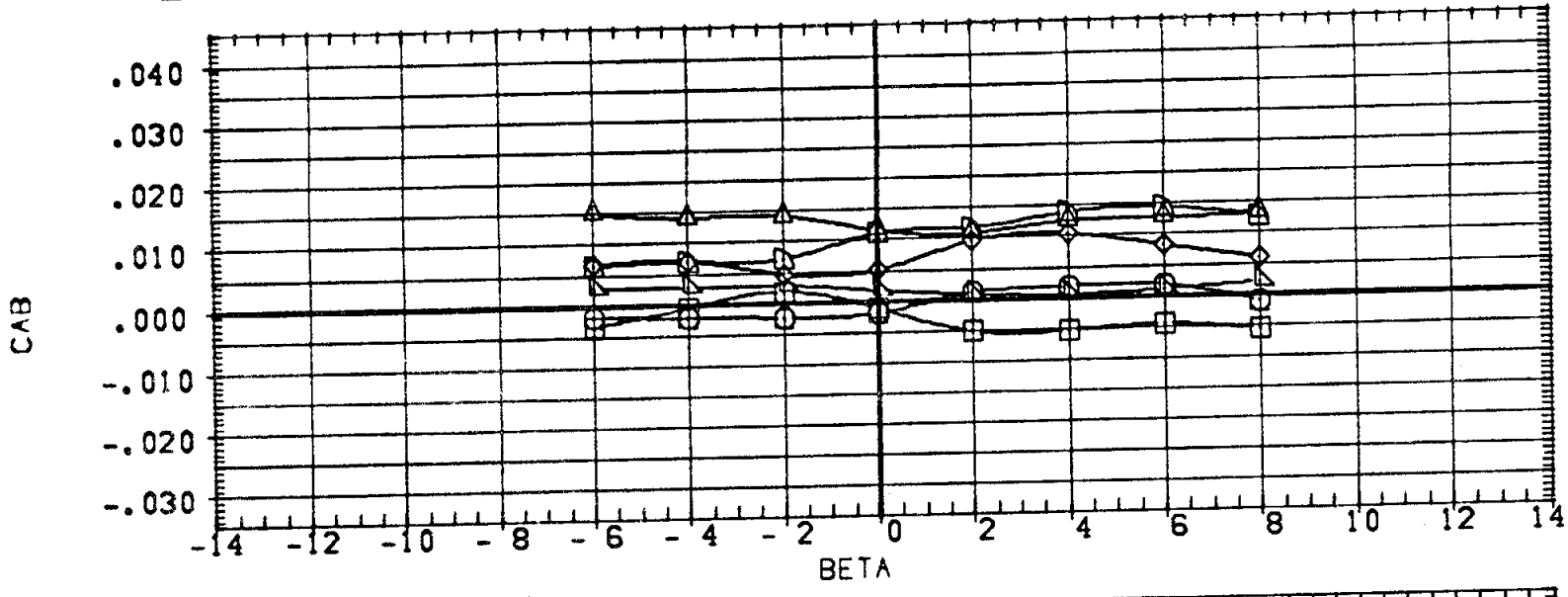
[C]MACH = 1.00

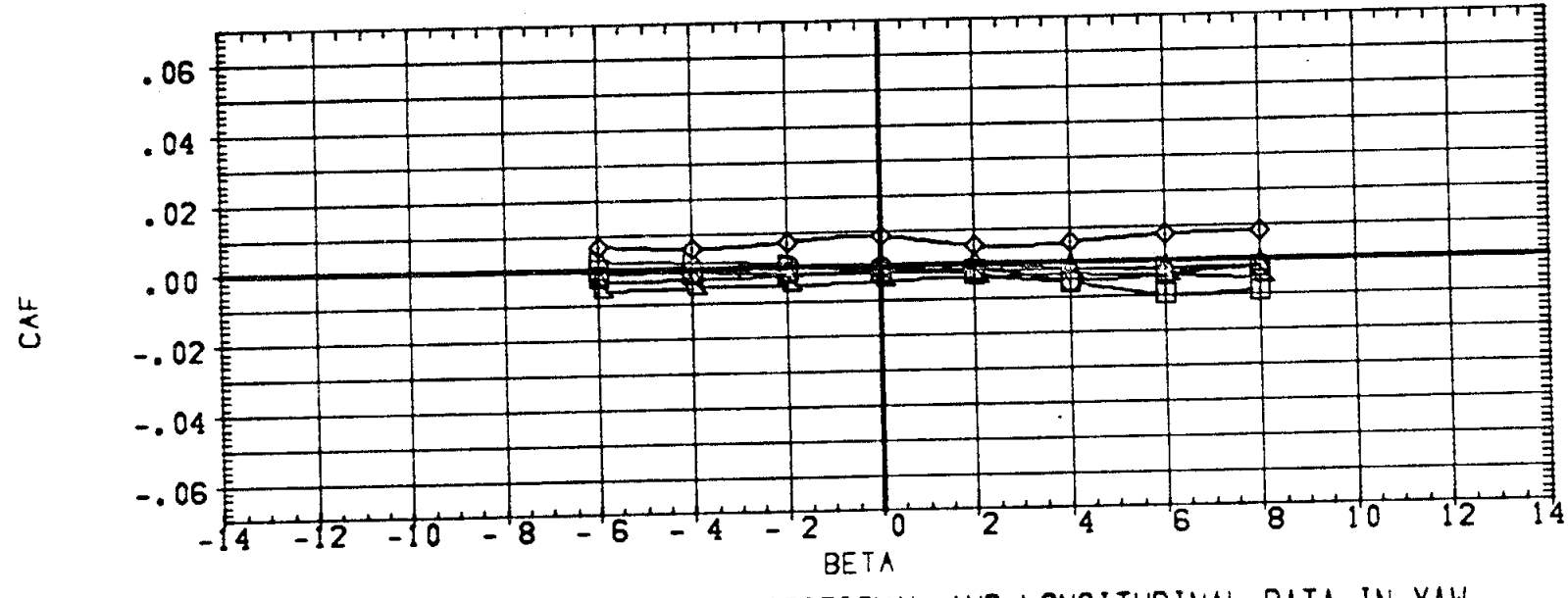
DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R72G01)		MSFC 545 (1A1)	TANK ON ORBITER
(R72H01)		MSFC 545 (1A1)	ORBITER ON TANK
(R72J02)		MSFC 545 (1A1)	SRB ON TANK
(R72K03)		MSFC 545 (1A1)	TANK ON SRB
(R72L02)		MSFC 545 (1A1)	SRB ON ORBITER
(R72M05)		MSFC 545 (1A1)	ORBITER ON SRB

ORBINC	DELTAZ	RUDFLR
		10.000
.000	.120	10.000
.000	.120	10.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





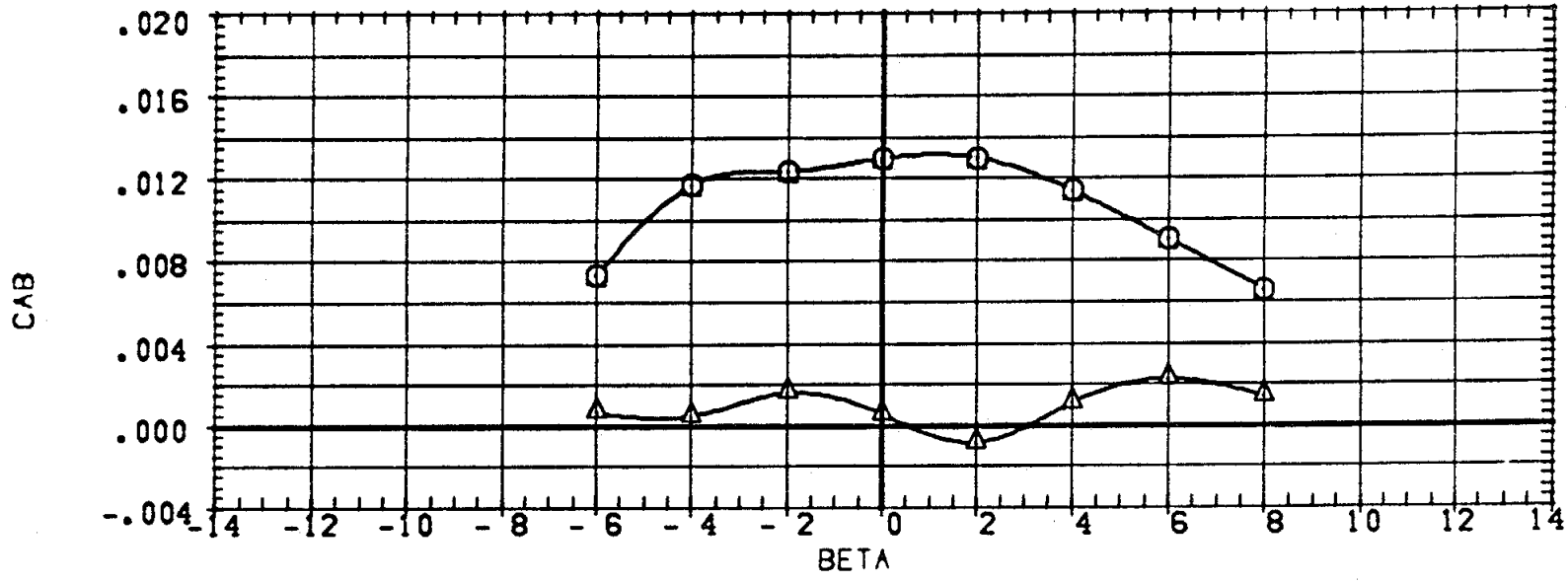
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

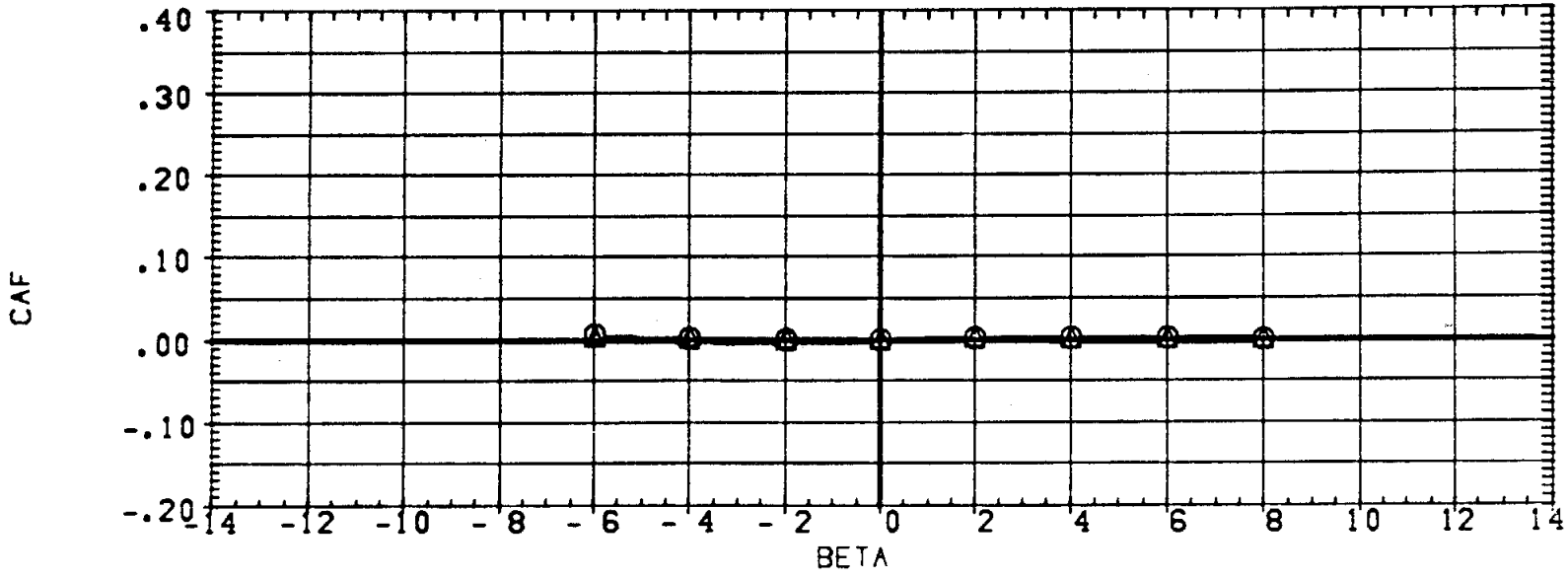
(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(RY2J02)	○	MSFC 545 (IA1) SRB ON TANK	.000	.120	10.000
(RY2L02)	△	MSFC 545 (IA1) SRB ON ORBITER	.000	.120	10.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

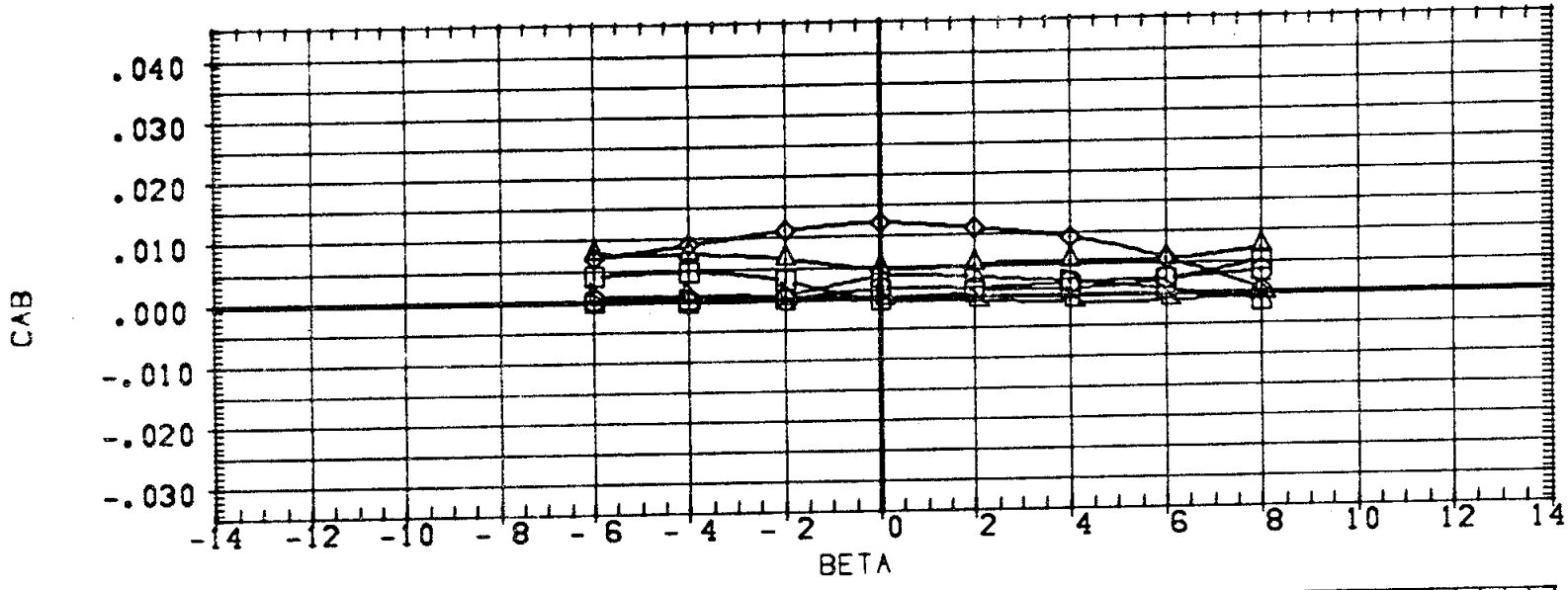
(E)MACH = 1.46

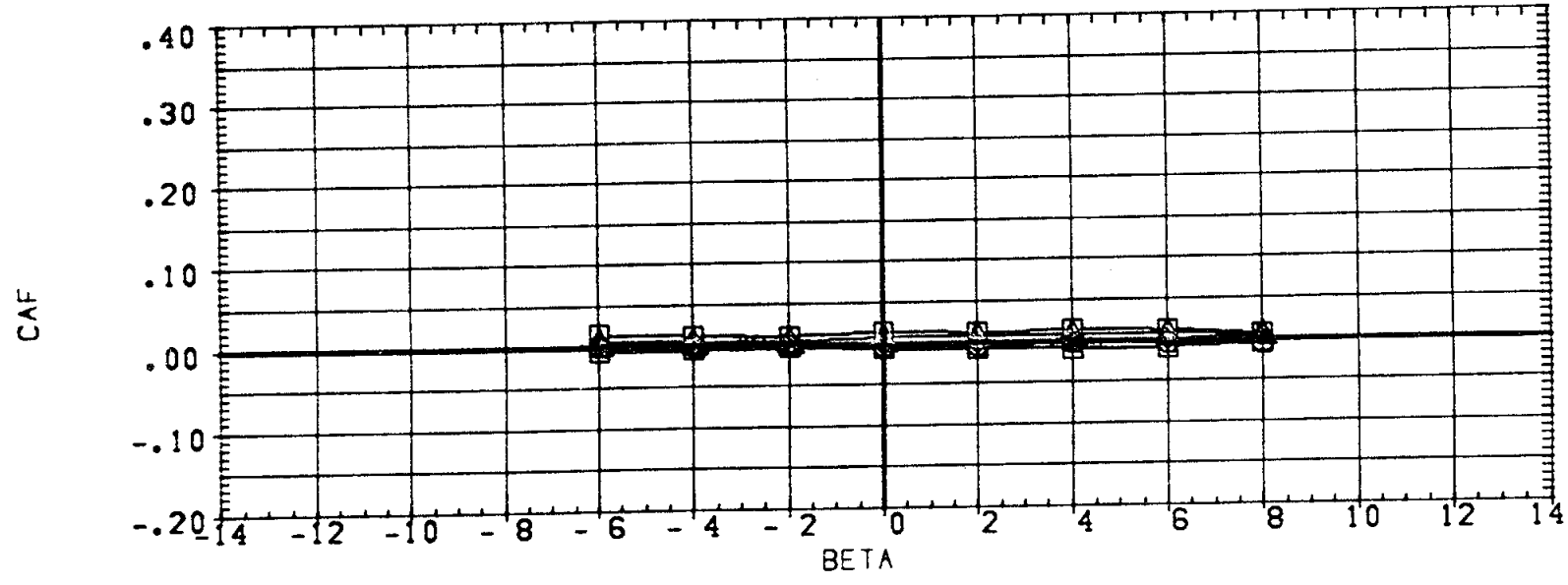
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		
(R72G01)	○	MSFC 545 (IA1)	TANK ON ORBITER	
(R72H01)	◇	MSFC 545 (IA1)	ORBITER ON TANK	
(R72J02)	□	MSFC 545 (IA1)	SRB ON TANK	
(R72K03)	△	MSFC 545 (IA1)	TANK ON SRB	
(R72L02)	▽	MSFC 545 (IA1)	SRB ON ORBITER	
(R72M05)	◁	MSFC 545 (IA1)	ORBITER ON SRB	

ORBINC	DELTAZ	RUDFLR
		10.000
.000	.120	10.000
.000	.120	10.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



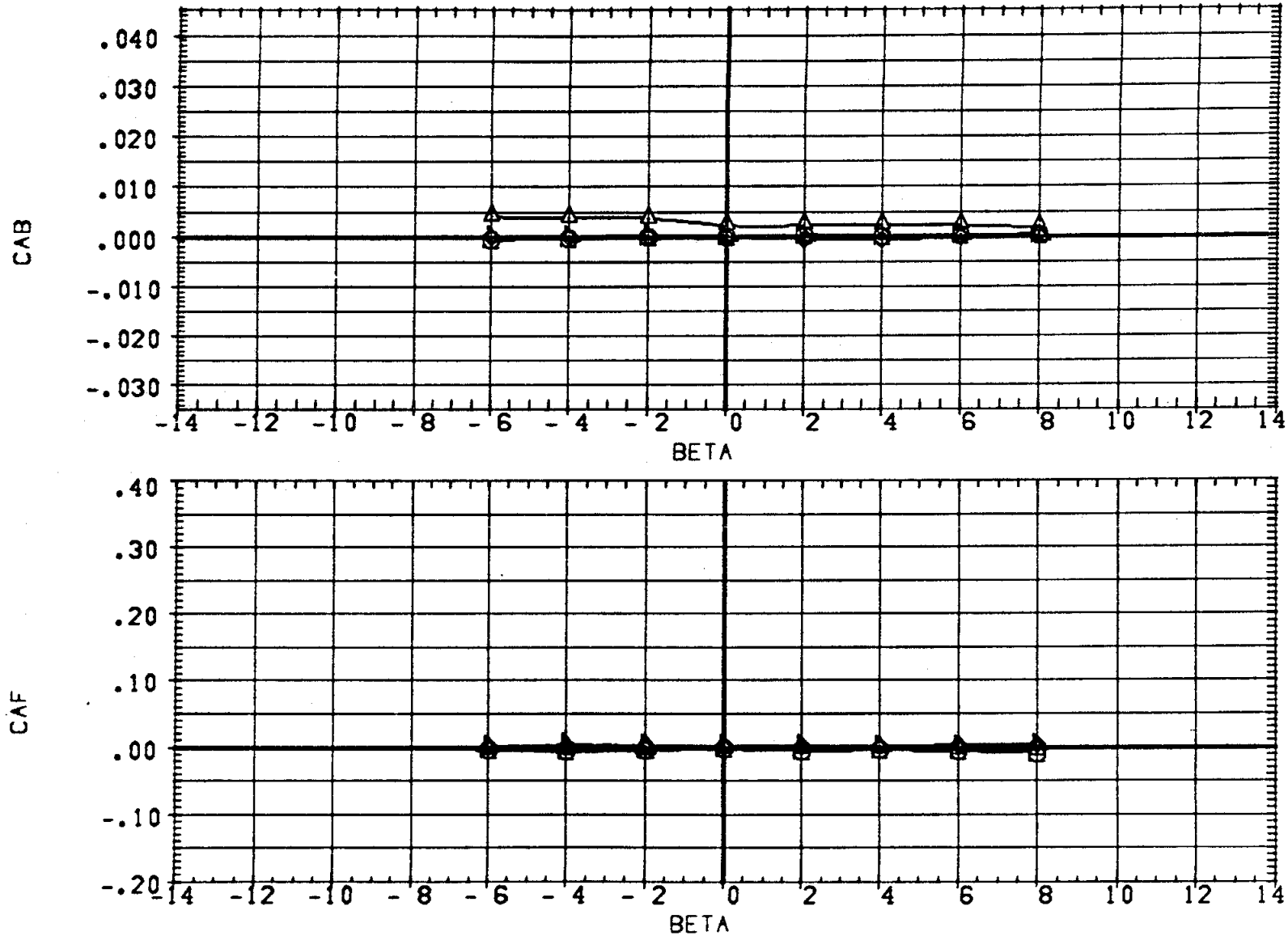


INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(F)MAC- = 1.96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545 (1A1) TANK ON ORBITER			10.000
(R72H01)		MSFC 545 (1A1) ORBITER ON TANK			
(R72J02)		MSFC 545 (1A1) SRB ON TANK	.000	.120	10.000
(R72K03)		DATA NOT AVAILABLE			
(R72L02)		MSFC 545 (1A1) SRB ON ORBITER	.000	.120	10.000
(R72M05)		DATA NOT AVAILABLE			

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



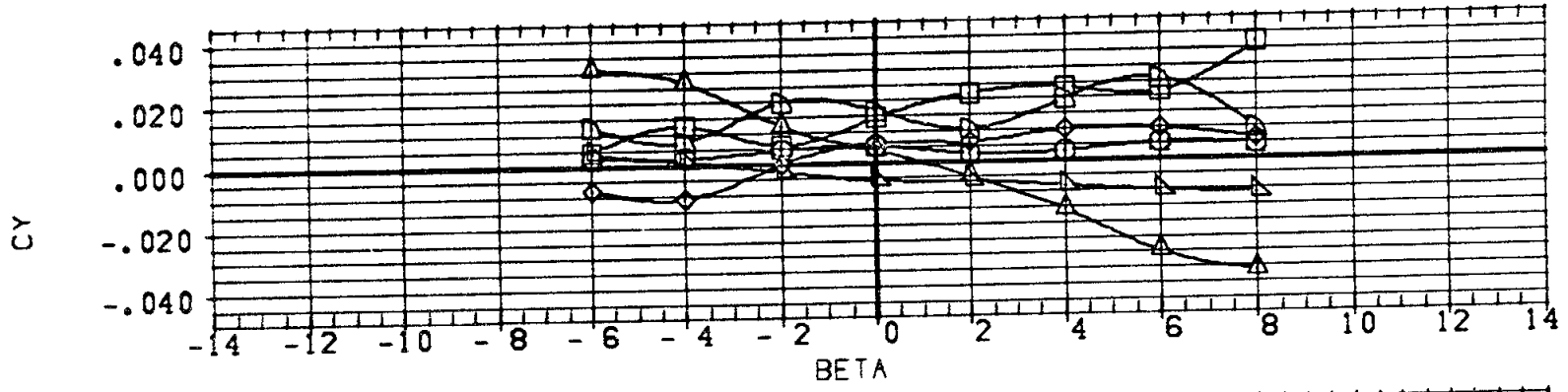
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

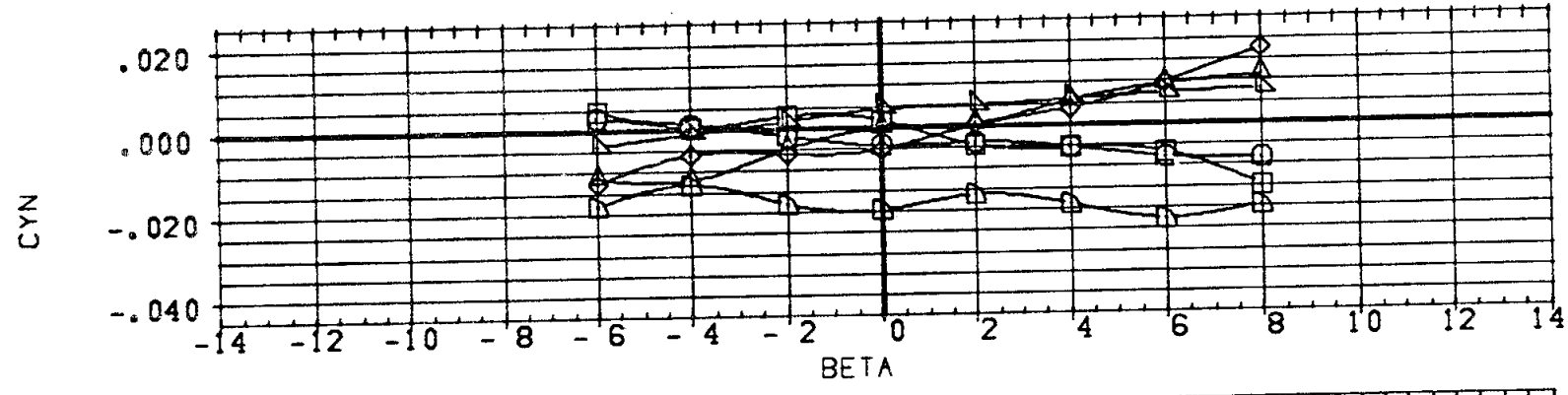
(G)MACH = 4.96

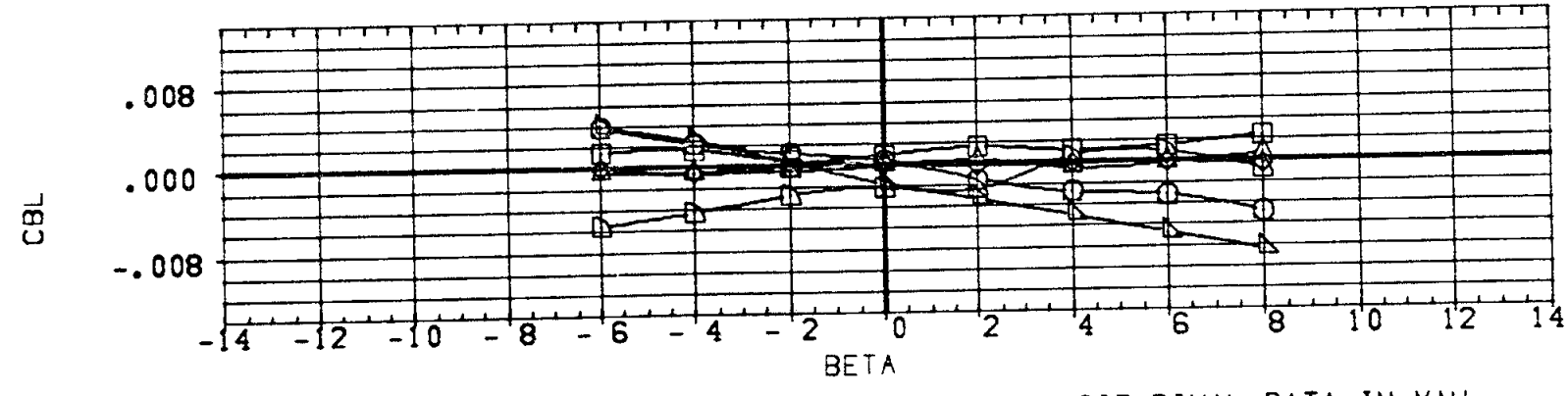
DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545 (IA1)	TANK ON ORBITER			10.000
(R72H01)		MSFC 545 (IA1)	ORBITER ON TANK	.000	.120	10.000
(R72J02)		MSFC 545 (IA1)	SRB ON TANK	.000	.120	10.000
(R72K03)		MSFC 545 (IA1)	TANK ON SRB			
(R72L02)		MSFC 545 (IA1)	SRB ON ORBITER			
(R72M05)		MSFC 545 (IA1)	ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





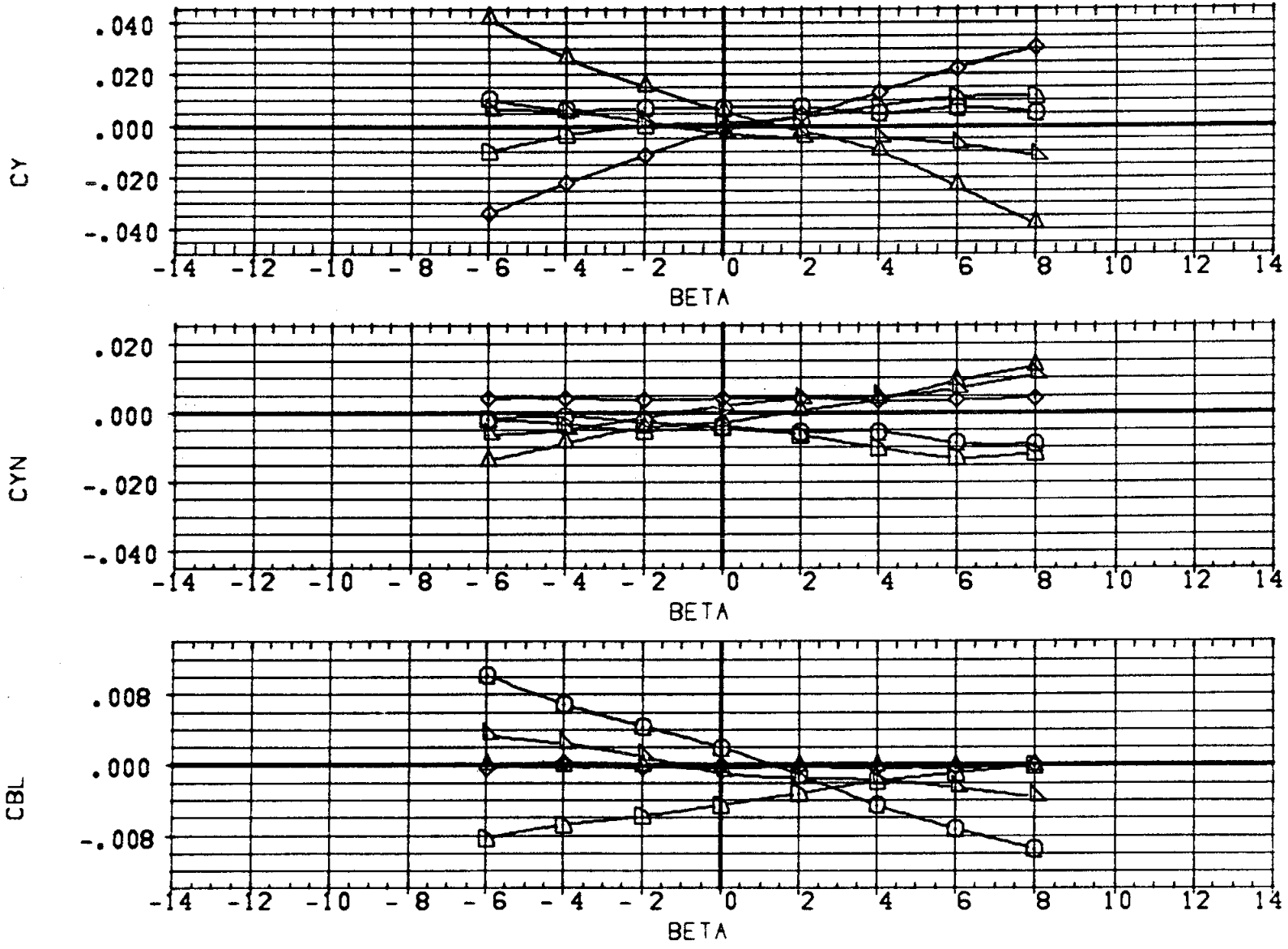


INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)	○	MSFC 545 (IA1) TANK ON ORBITER			10.000
(R72H01)	□	MSFC 545 (IA1) ORBITER ON TANK			
(R72J02)	△	MSFC 545 (IA1) SRB ON TANK	.000	.120	10.000
(R72K03)		DATA NOT AVAILABLE			
(R72L02)	◇	MSFC 545 (IA1) SRB ON ORBITER	.000	.120	10.000
(R72M03)	▽	MSFC 545 (IA1) ORBITER ON SRB			

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



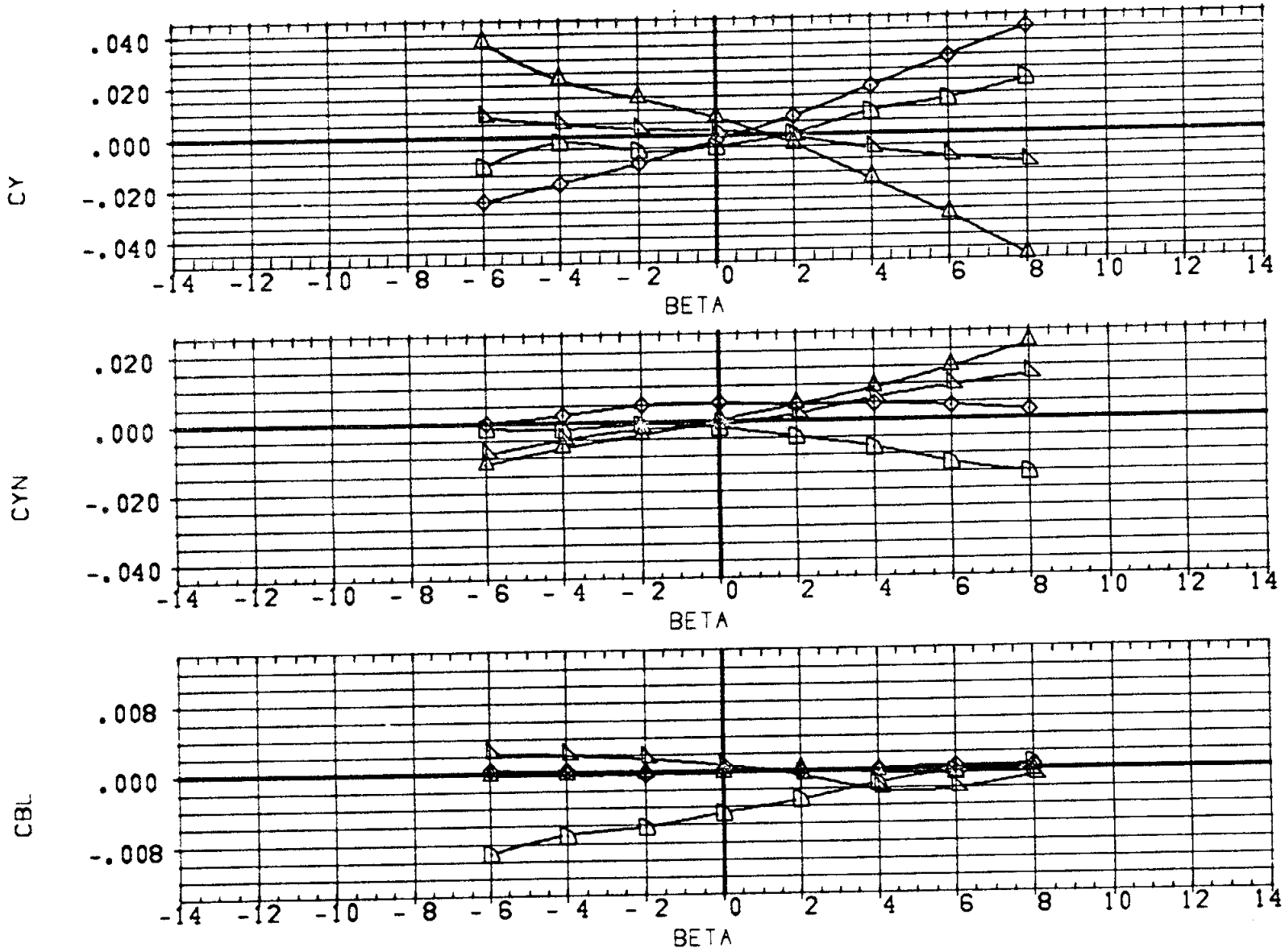
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		DATA NOT AVAILABLE			10.000
(R72H01)		MSFC 545 (IA1) ORBITER ON TANK	.000	.120	10.000
(R72J02)		MSFC 545 (IA1) SRB ON TANK			
(R72K03)		DATA NOT AVAILABLE	.000	.120	10.000
(R72L02)		MSFC 545 (IA1) SRB ON ORBITER			
(R72H03)		MSFC 545 (IA1) ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

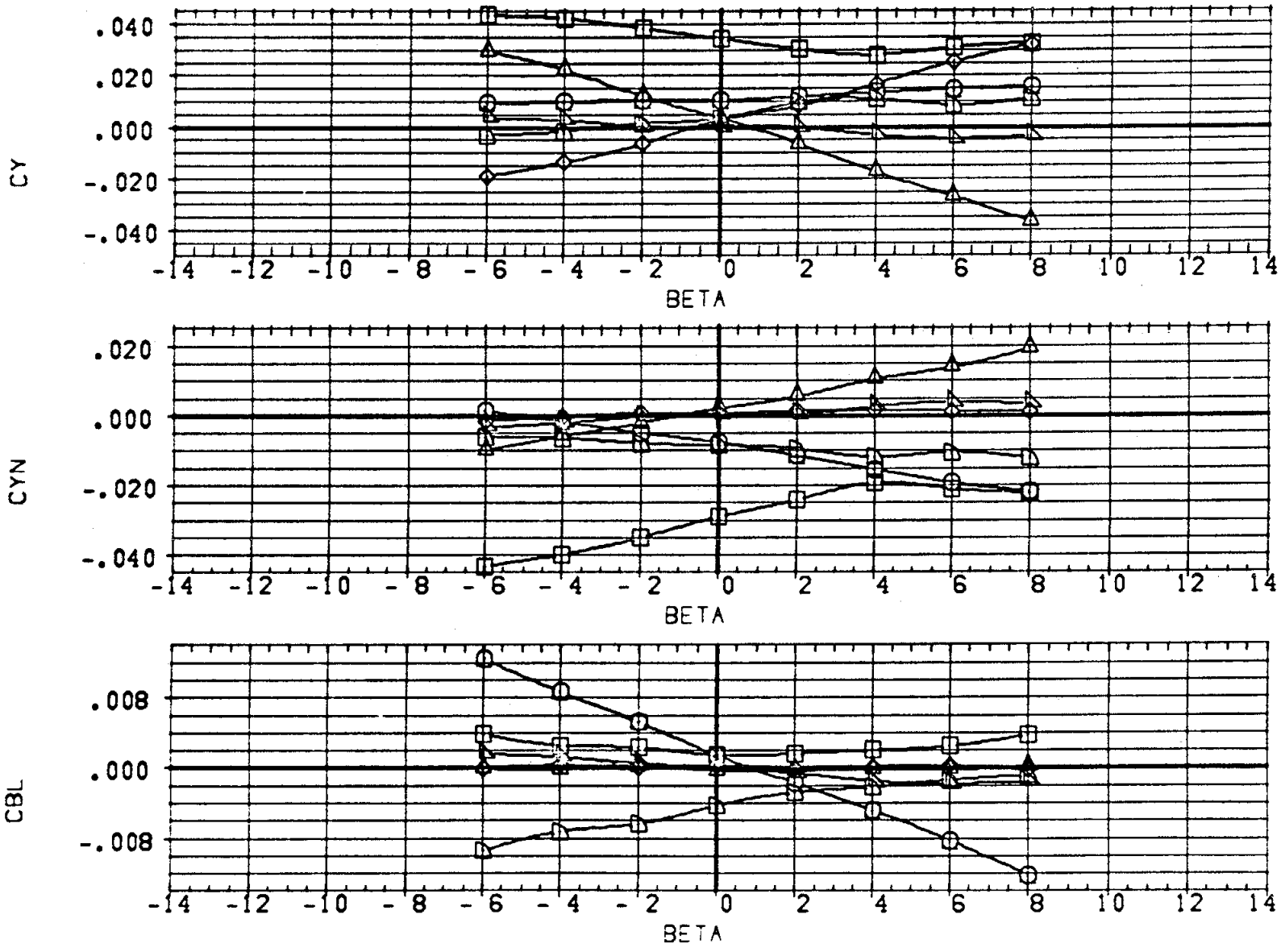


INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(C)MAC = 1.00

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545 (1A1)	TANK ON ORBITER			10.000
(R72H01)		MSFC 545 (1A1)	ORBITER ON TANK			
(R72J02)		MSFC 545 (1A1)	SRB ON TANK	.000	.120	10.000
(R72K03)		MSFC 545 (1A1)	TANK ON SRB			
(R72L02)		MSFC 545 (1A1)	SRB ON ORBITER	.000	.120	10.000
(R72M03)		MSFC 545 (1A1)	ORBITER ON SRB			

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



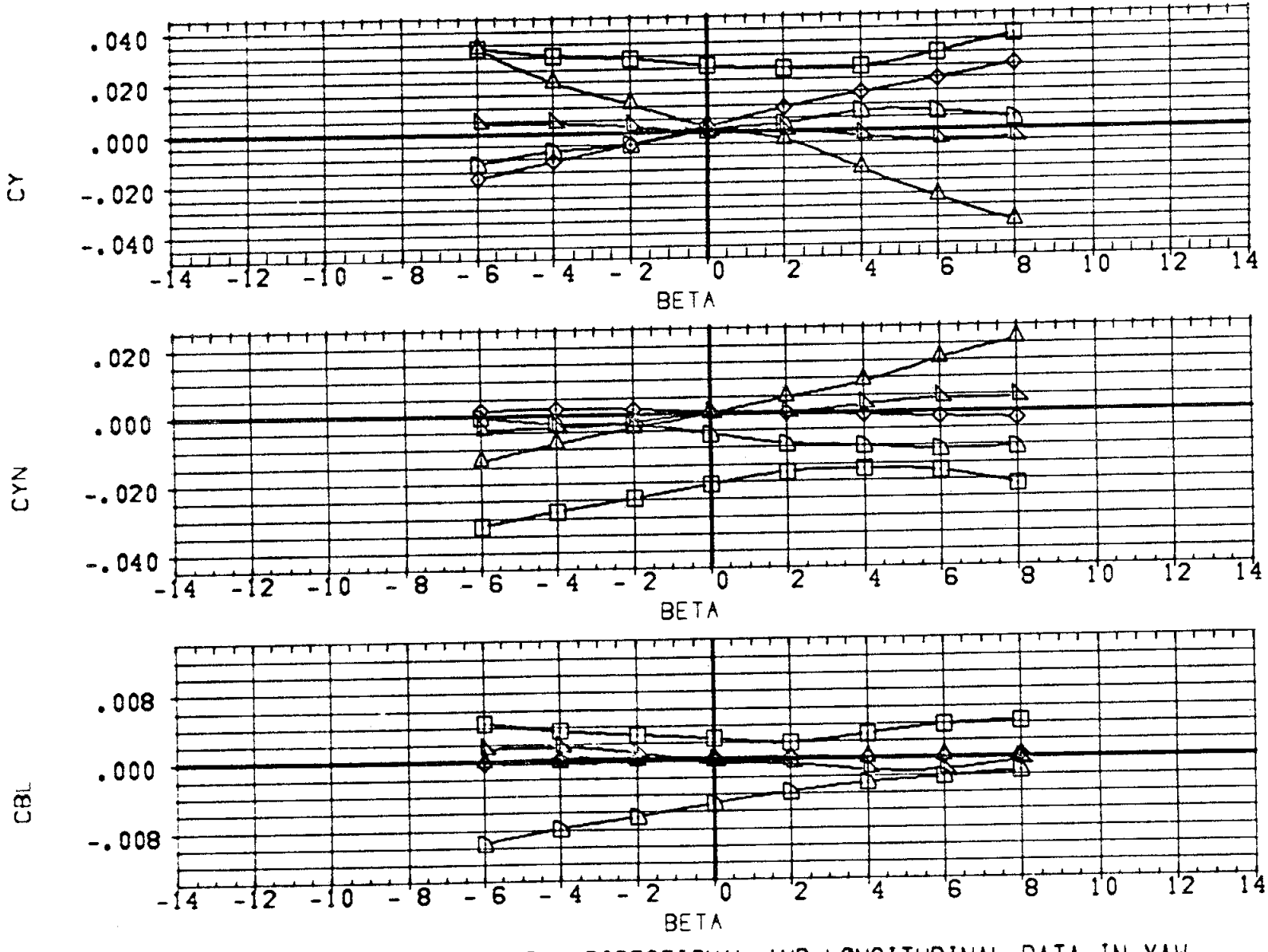
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(D)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	ORBINC	DELTAZ	RUOFLR
(R72G01)		DATA NOT AVAILABLE				10.000
(R72H01)	◇	MSFC 545 (IA1)	ORBITER ON TANK	.000	.120	10.000
(R72J02)	△	MSFC 545 (IA1)	SRB ON TANK			
(R72K03)		MSFC 545 (IA1)	TANK ON SRB	.000	.120	10.000
(R72L02)		MSFC 545 (IA1)	SRB ON ORBITER			
(R72M03)	▽	MSFC 545 (IA1)	ORBITER ON SRB			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT

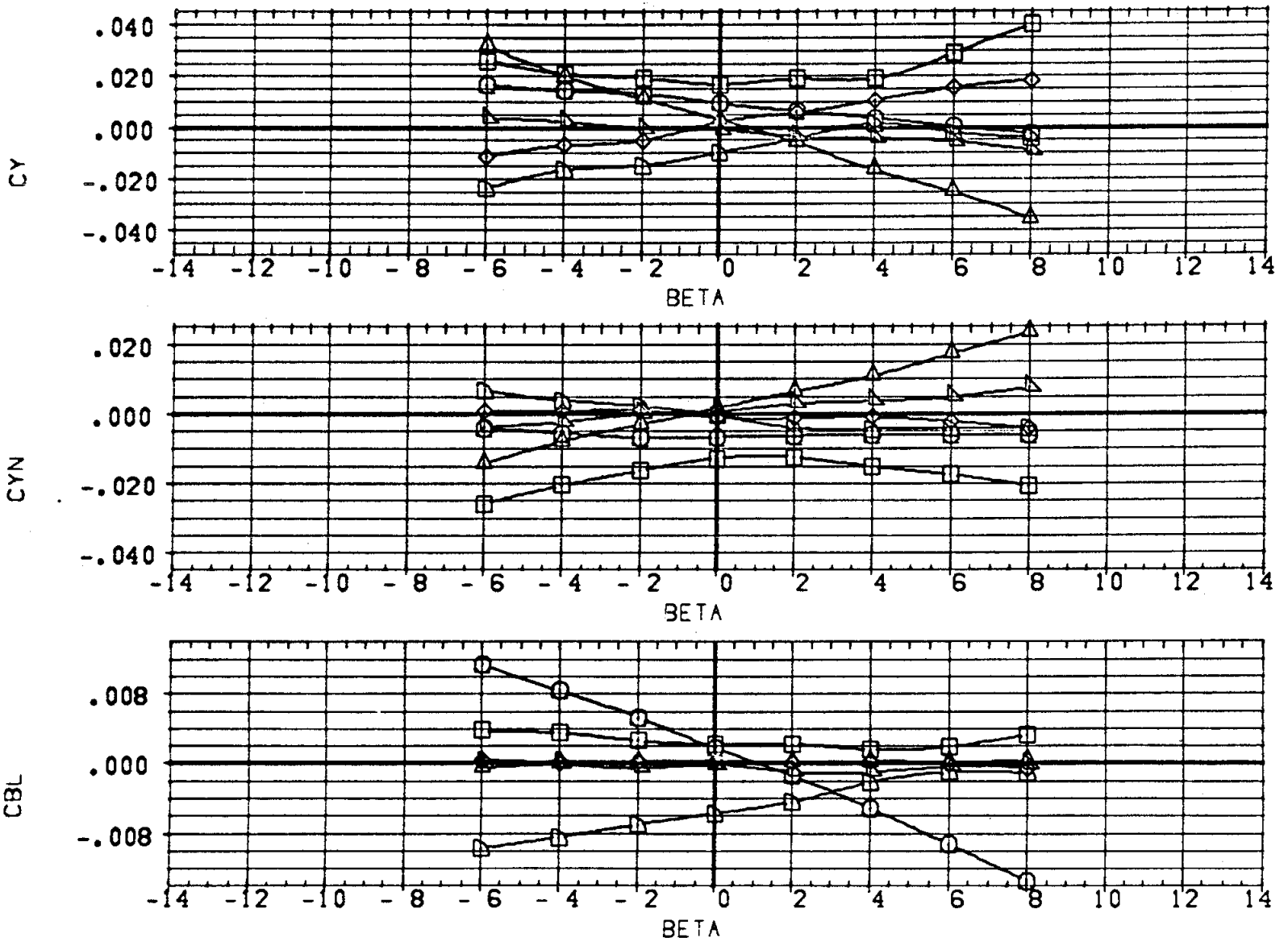


INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

(E)MACH = 1.46

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545 (1A1)	TANK ON ORBITER			10.000
(R72H01)		MSFC 545 (1A1)	ORBITER ON TANK			
(R72J02)		MSFC 545 (1A1)	SRB ON TANK	.000	.120	10.000
(R72K03)		MSFC 545 (1A1)	TANK ON SRB			
(R72L02)		MSFC 545 (1A1)	SRB ON ORBITER	.000	.120	10.000
(R72M05)		MSFC 545 (1A1)	ORBITER ON SRB			

REFERENCE INFORMATION		
SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



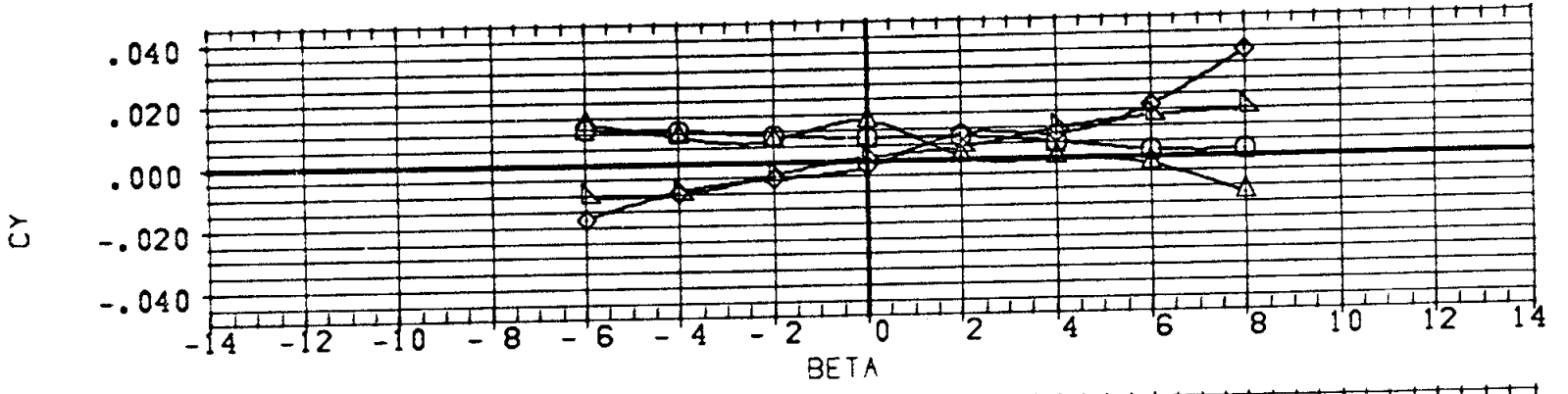
INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

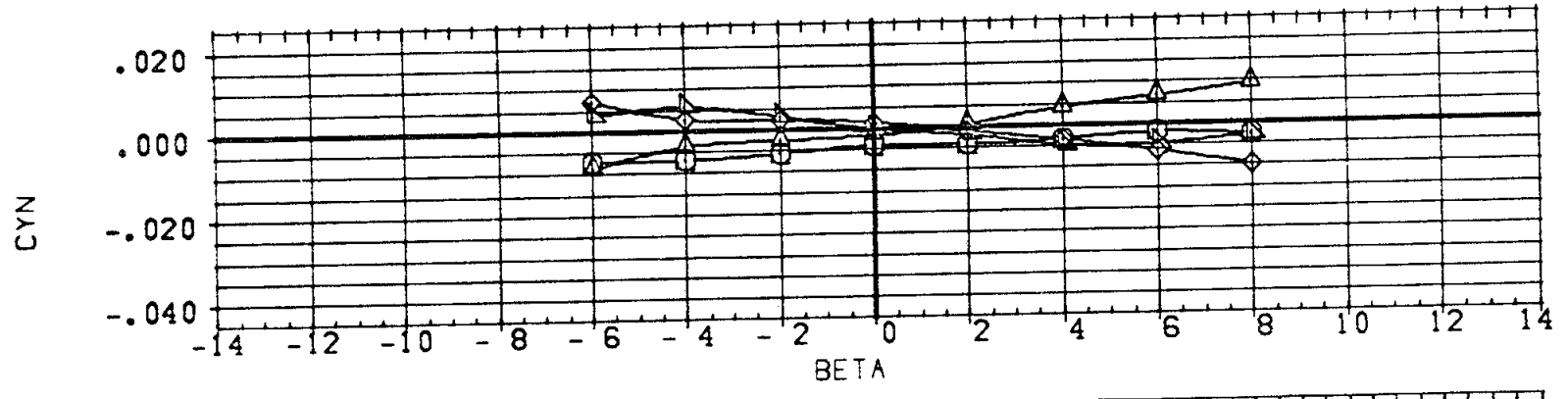
(F)MACH = 1.96

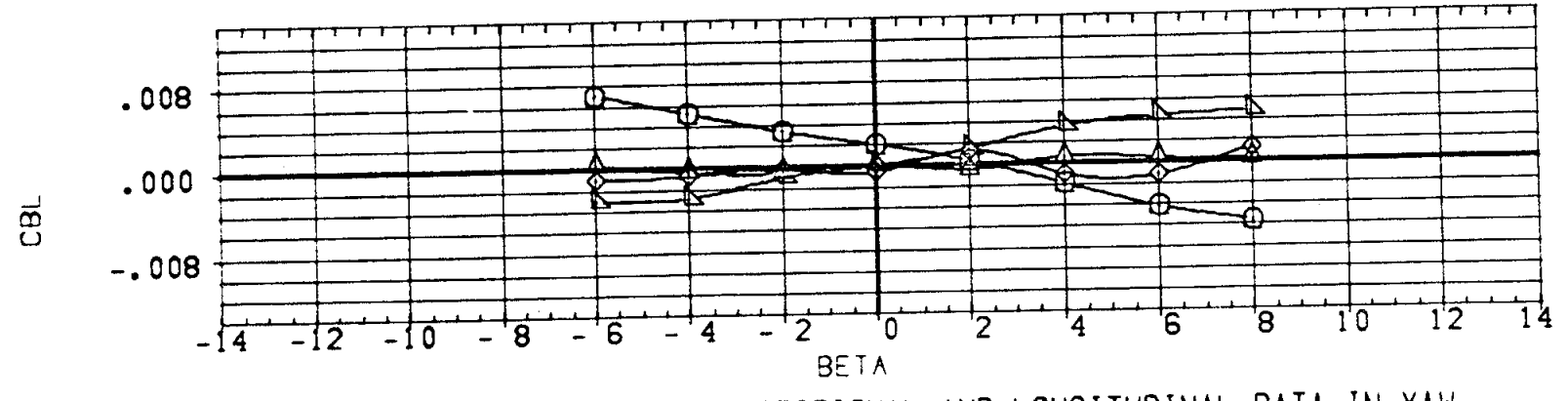
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBINC	DELTAZ	RUDFLR
(R72G01)		MSFC 545 (1A1) TANK ON ORBITER			10.000
(R72H01)		MSFC 545 (1A1) ORBITER ON TANK	.000	.120	10.000
(R72J02)		MSFC 545 (1A1) SRB ON TANK			
(R72K03)		DATA NOT AVAILABLE	.000	.120	10.000
(R72L02)		MSFC 545 (1A1) SRB ON ORBITER			
(R72H05)		DATA NOT AVAILABLE			

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT







INTERFERENCE COEFFICIENTS LATERAL-DIRECTIONAL AND LONGITUDINAL DATA IN YAW

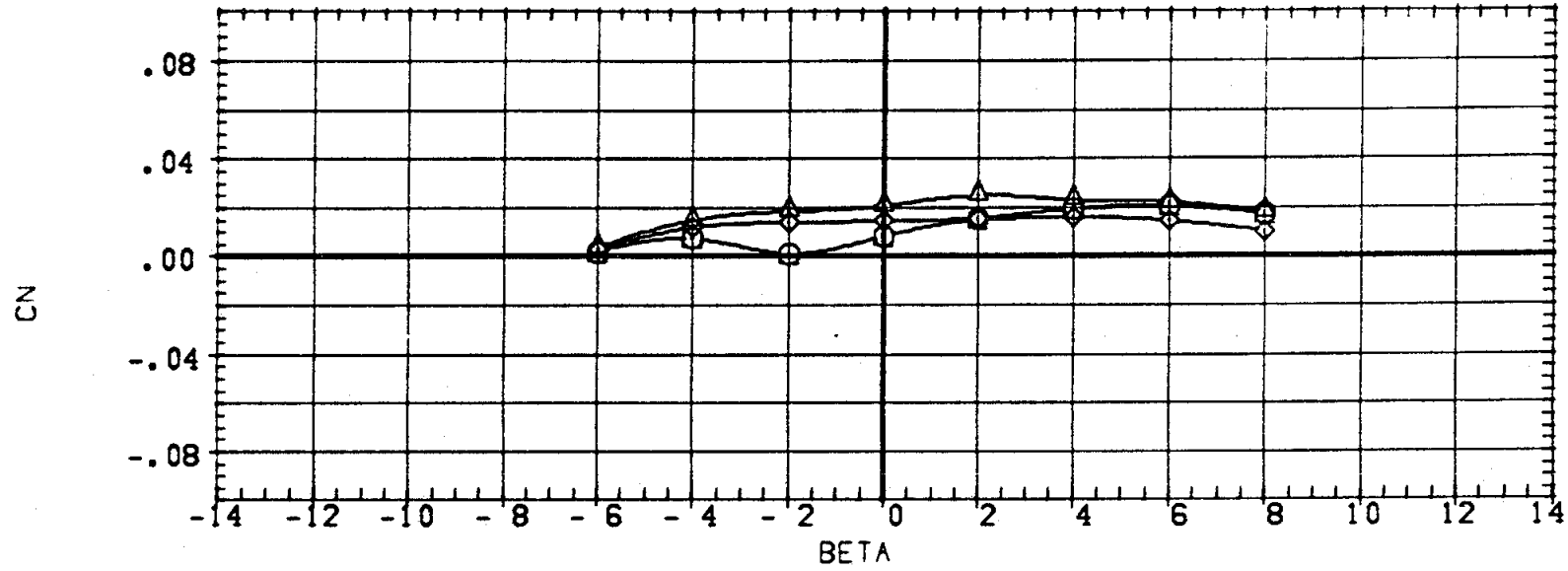
(S)MAC- = 4.96

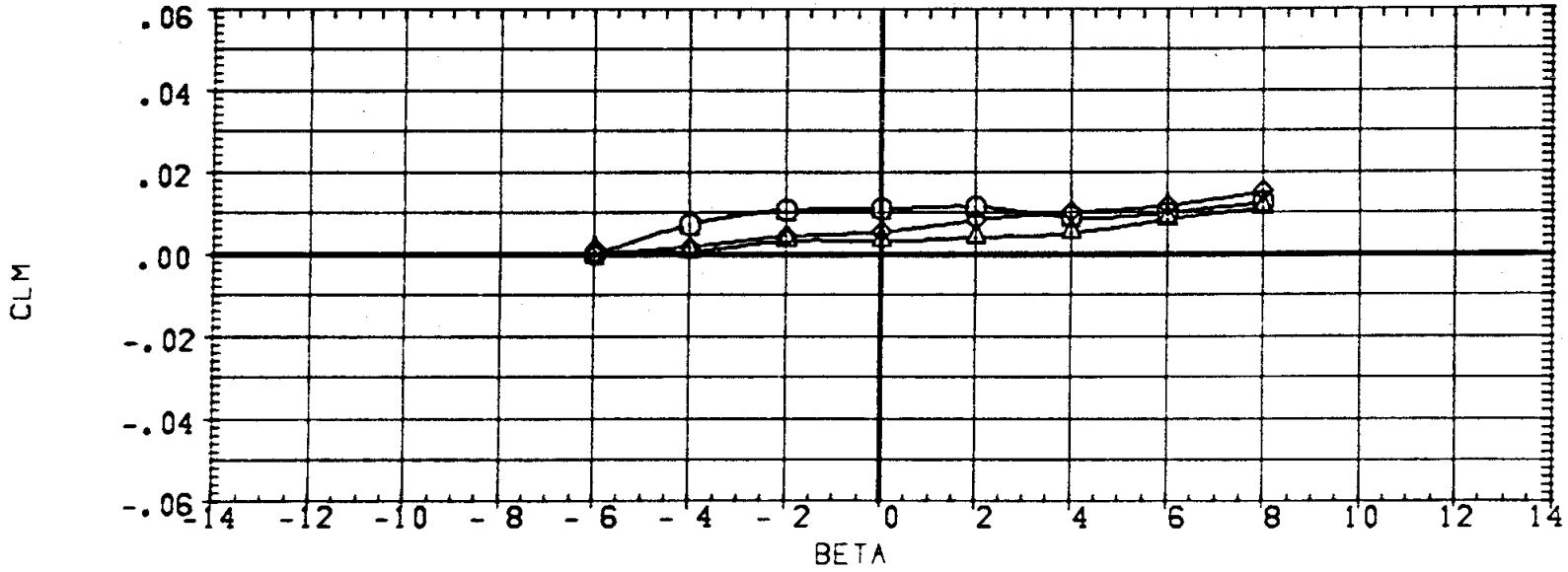
MSFC 545 (1A1) ONE SRB ON TANK (R72N01)

SYMBOL	MACH		PARAMETRIC VALUES
○	.600	ALPHA	.000
△	.900		
◇	1.000		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





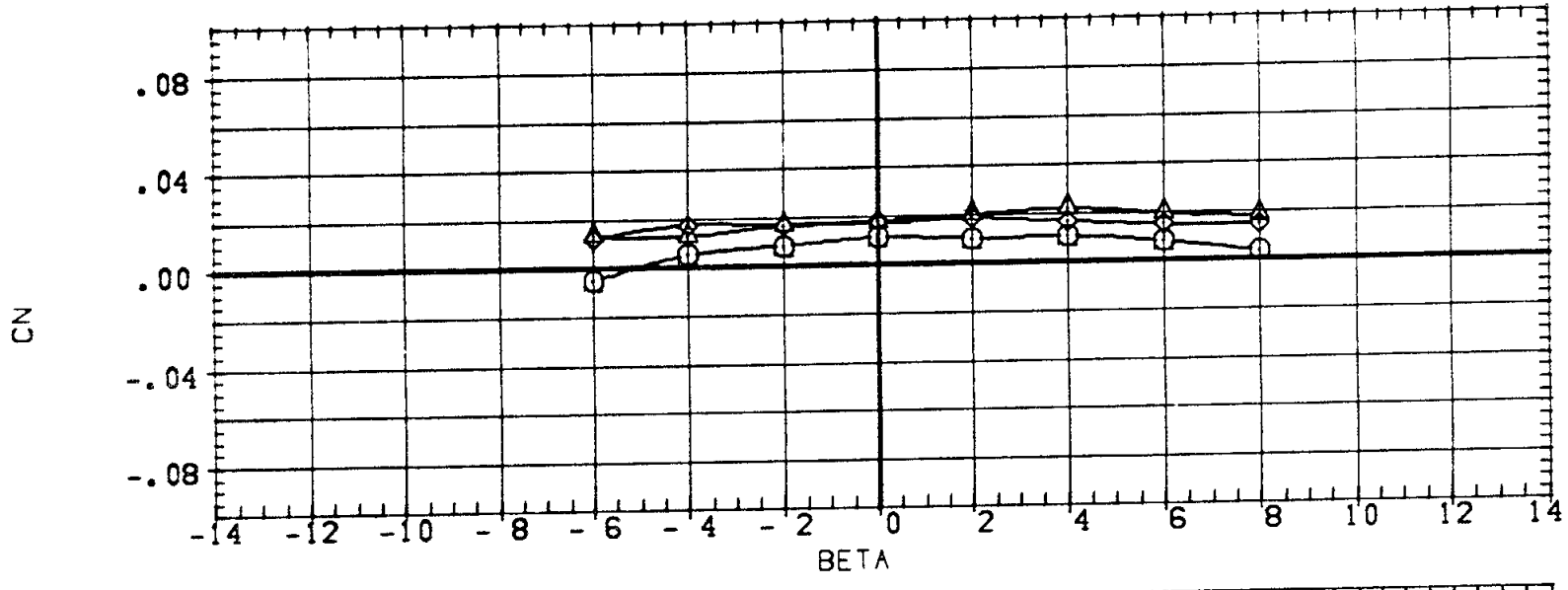
INTERFERENCE OF ONE SRB ON EXTERNAL TANK

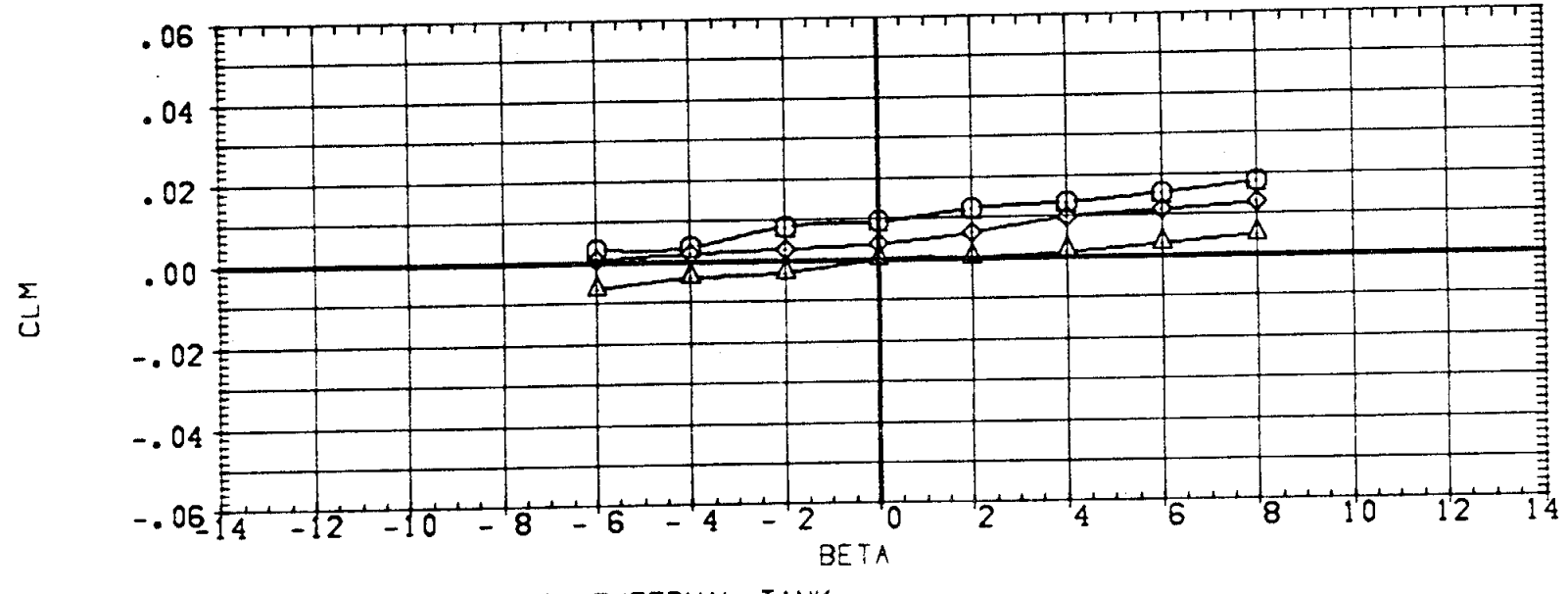
MSFC 545 (1A1) ONE SRB ON TANK (R72N01)

SYMBOL	MACH	PARAMETRIC VALUES	
○	1.200	ALPHA	.000
△	1.460		
◇	1.960		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





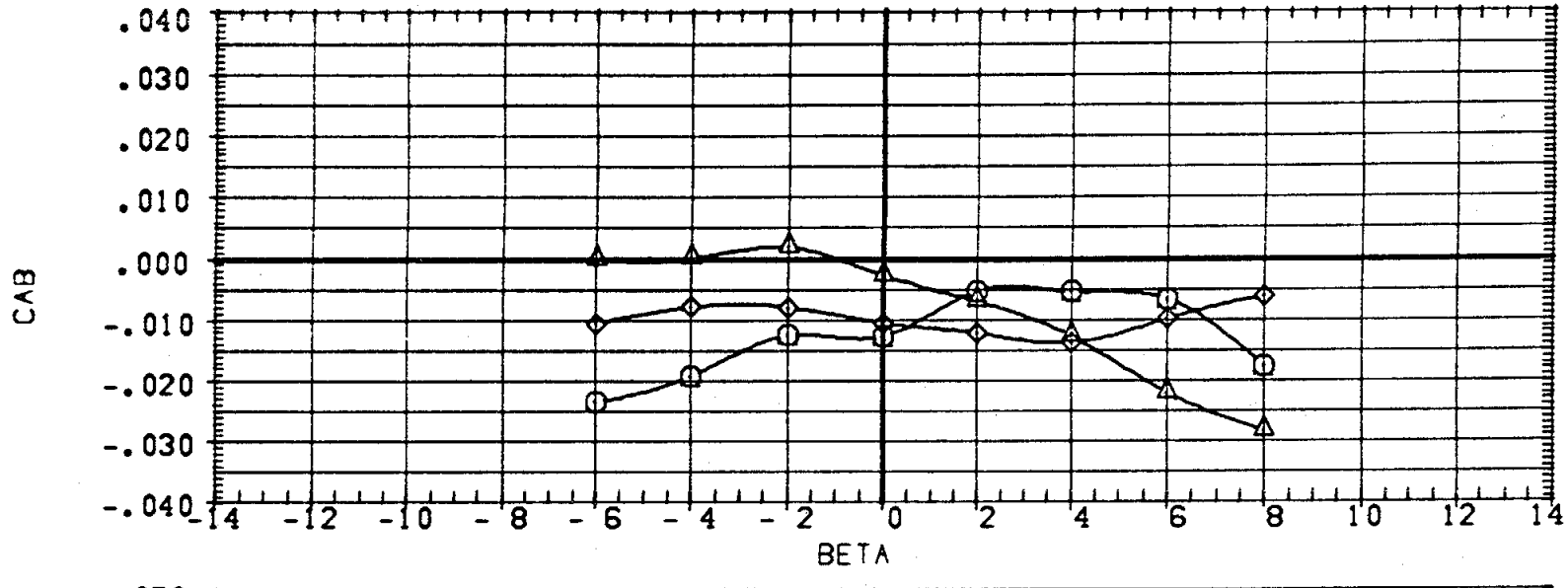
INTERFERENCE OF ONE SRB ON EXTERNAL TANK

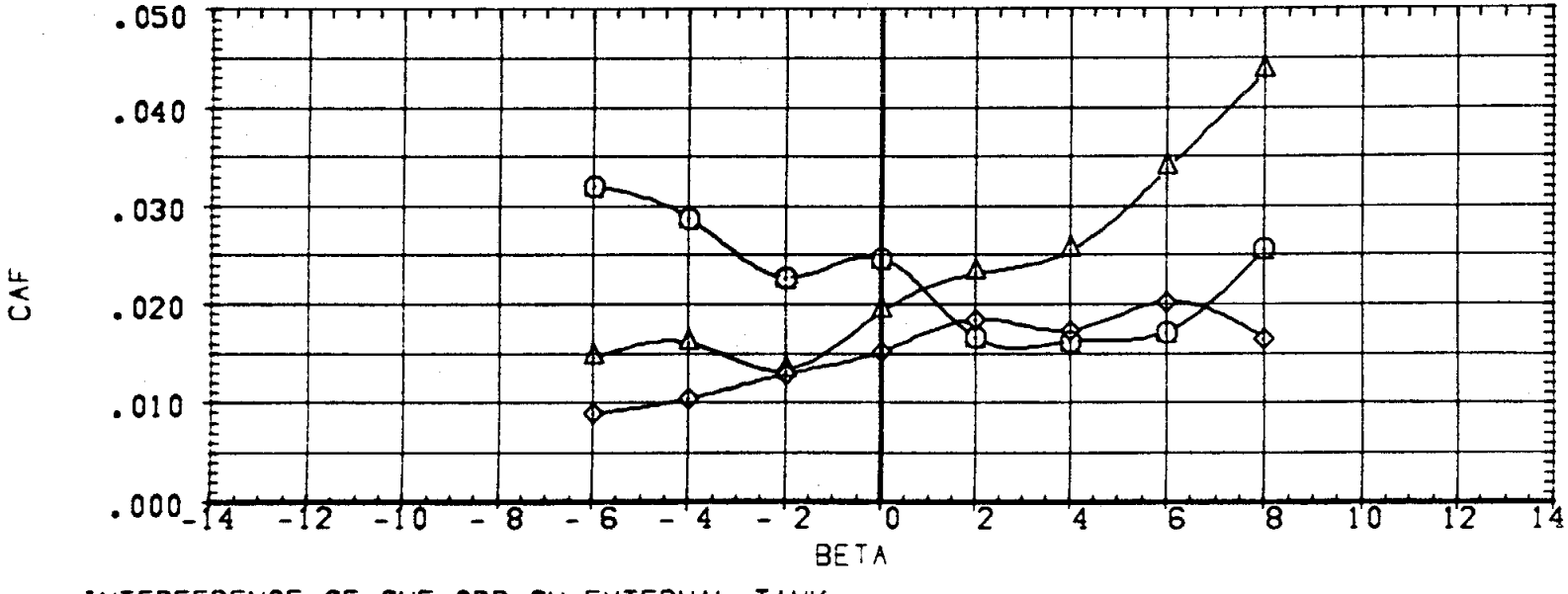
MSFC 545 (1A1) ONE SRB ON TANK (R72N01)

SYMBOL	MACH		PARAMETRIC VALUES
○	.600	ALPHA	.000
△	.900		
◇	1.000		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



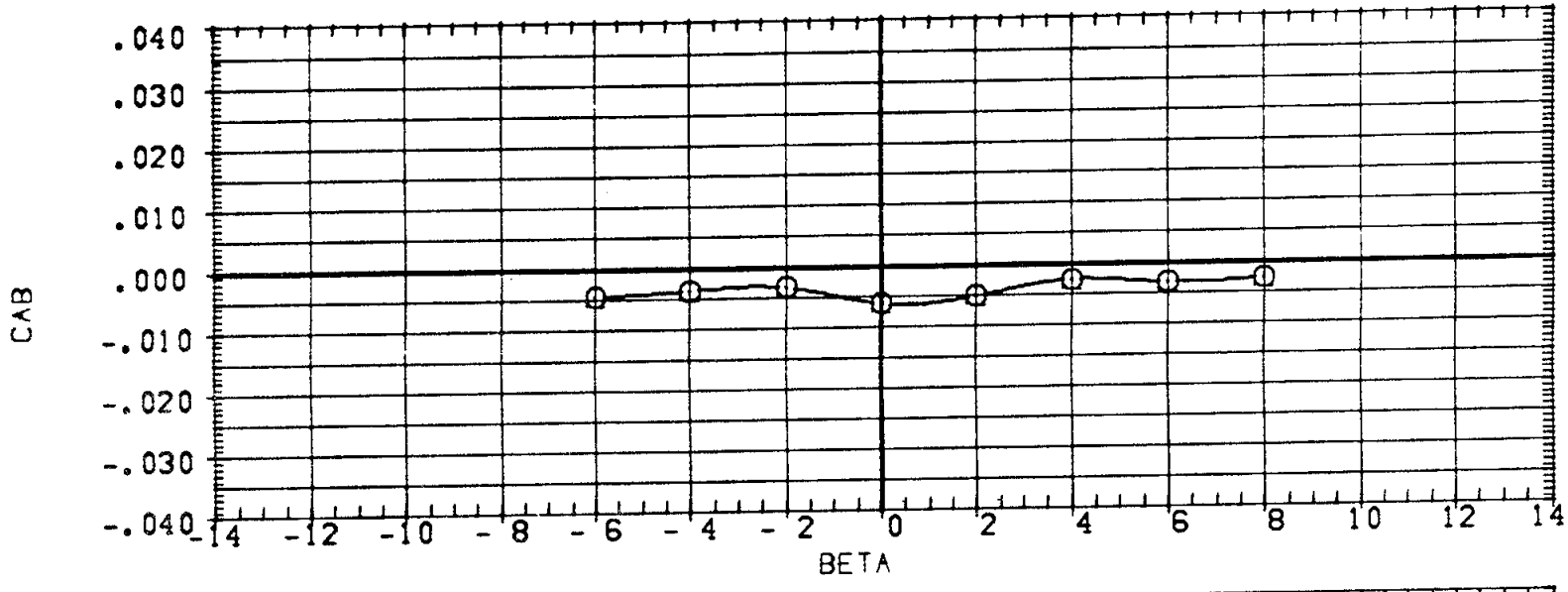


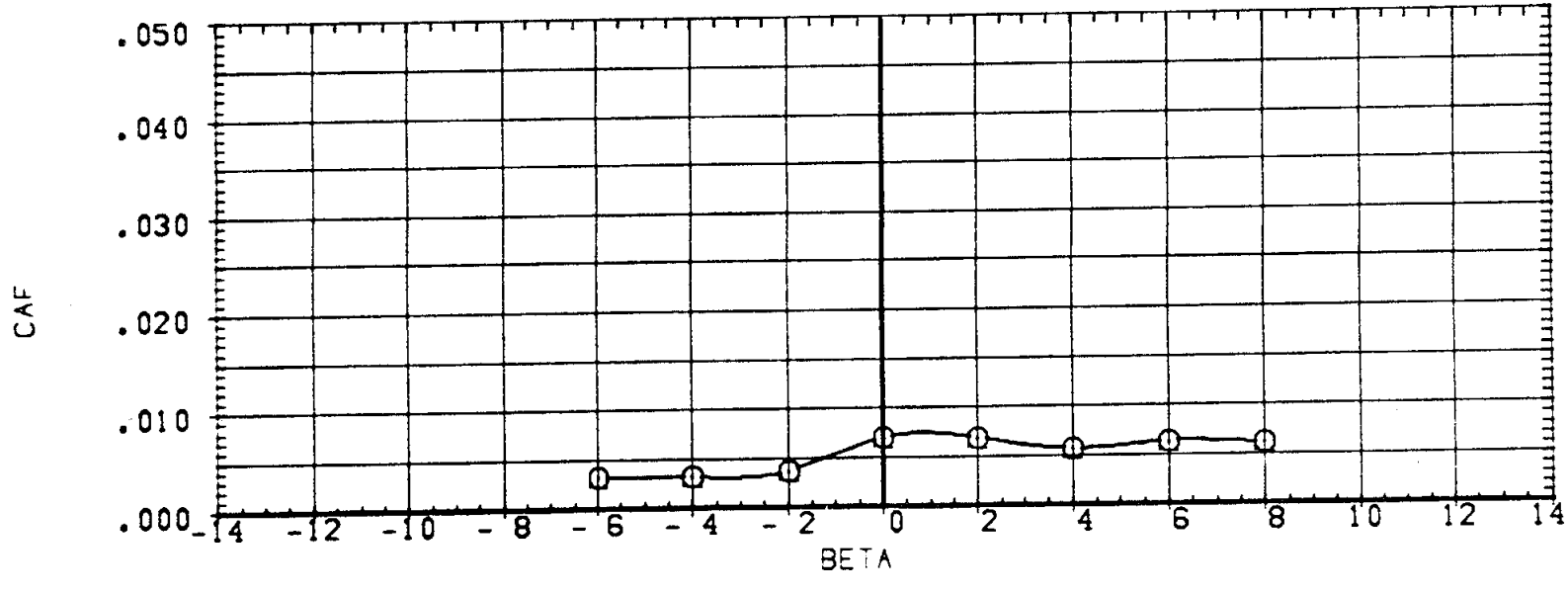
INTERFERENCE OF ONE SRB ON EXTERNAL TANK

SYMBOL	MACH		PARAMETRIC VALUES
○	1.200	ALPHA	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





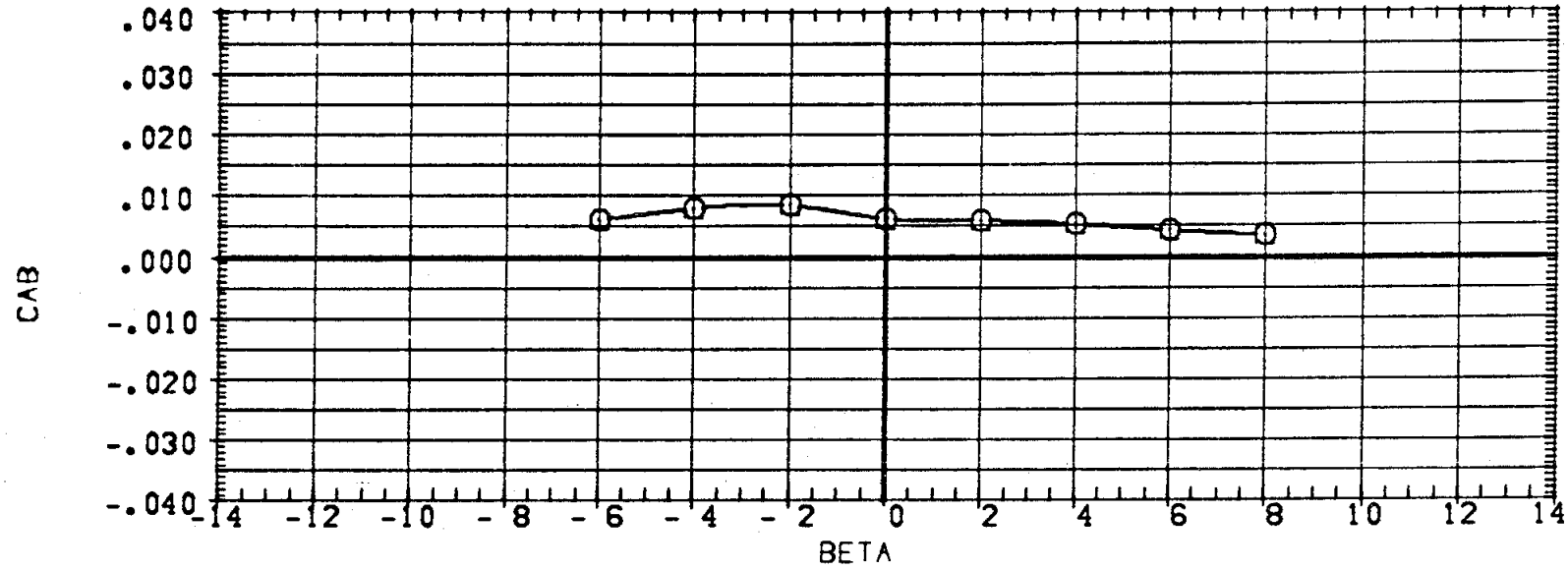
INTERFERENCE OF ONE SRB ON EXTERNAL TANK

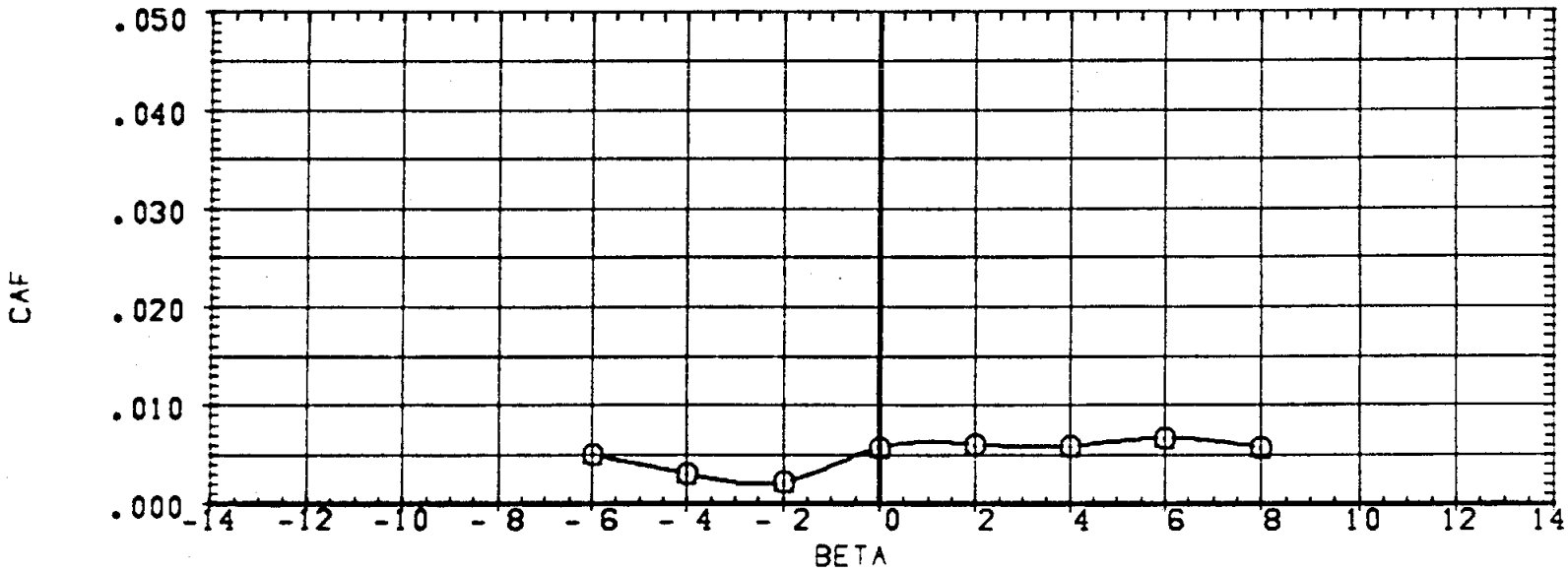
MSFC 545 (1A1) ONE SRB ON TANK (R72N01)

SYMBOL	MACH		PARAMETRIC VALUES
○	1.960	ALPHA	.000

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1326.0000	IN.
BREF	1326.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT





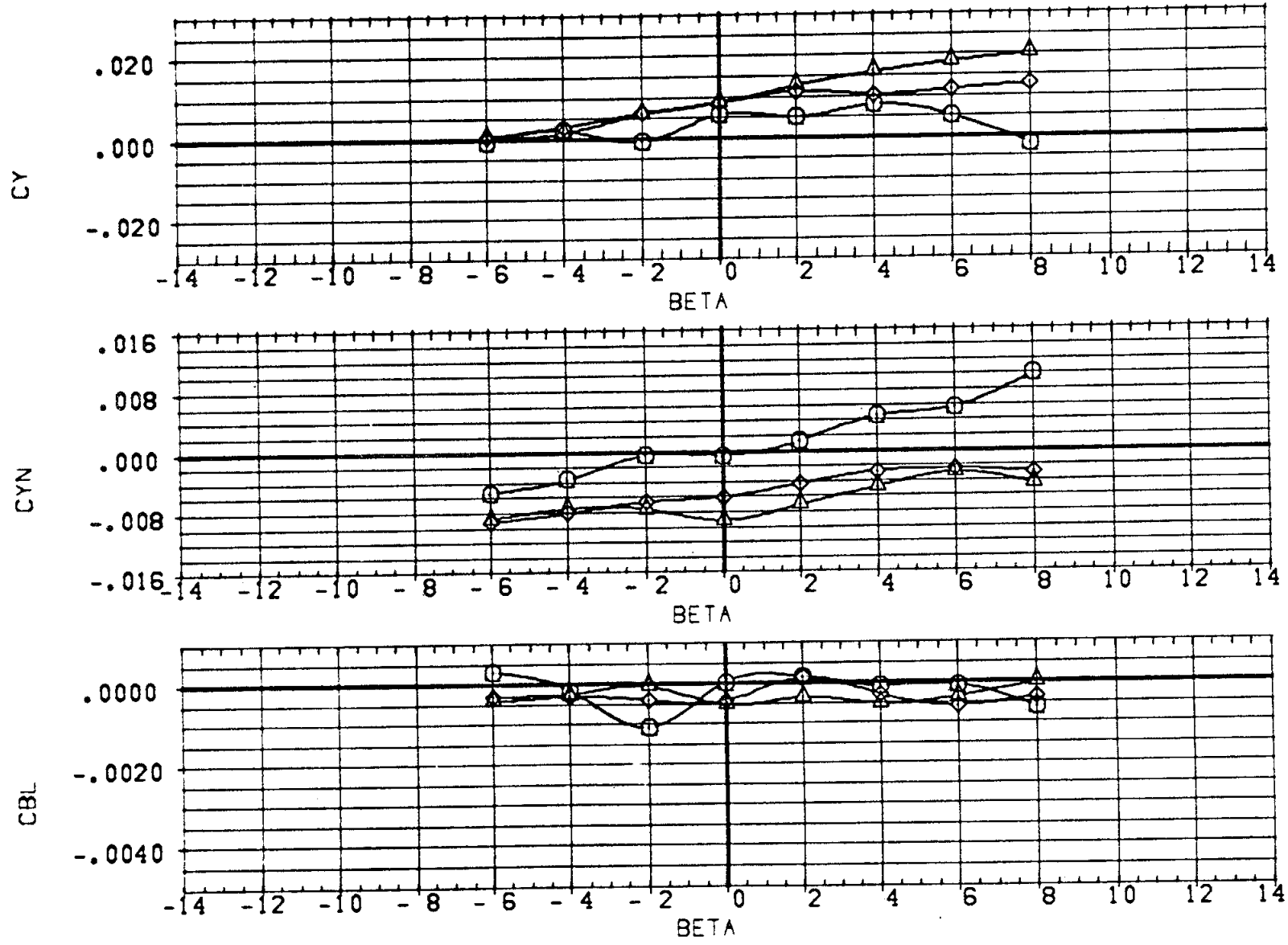
INTERFERENCE OF ONE SRB ON EXTERNAL TANK

MSFC 545 (1A1) ONE SRB ON TANK (R72N01)

SYMBOL	MACH		PARAMETRIC VALUES
○	.600	ALPHA	.000
△	.900		
◇	1.000		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



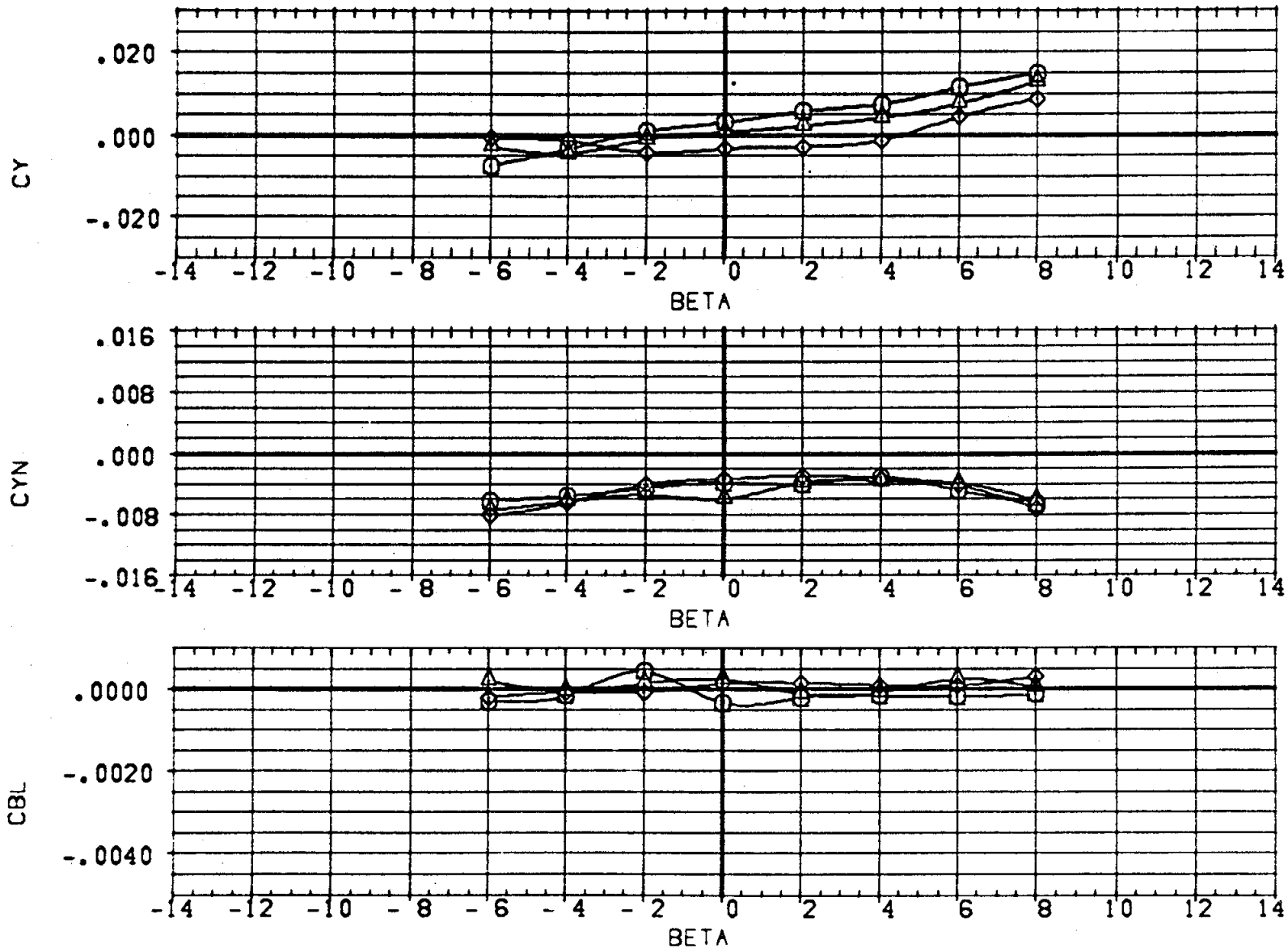
INTERFERENCE OF ONE SRB ON EXTERNAL TANK

MSFC 545 (IA1) ONE SRB ON TANK (R72N01)

SYMBOL	MACH		PARAMETRIC VALUES
○	1.200	ALPHA	.000
△	1.460		
◇	1.960		

REFERENCE INFORMATION

SREF	3220.0000	SQ.FT.
LREF	1328.0000	IN.
BREF	1328.0000	IN.
XMRP	.0000	
YMRP	.0000	
ZMRP	.0000	
SCALE	100.0000	PERCNT



INTERFERENCE OF ONE SRB ON EXTERNAL TANK

APPENDIX

TABULATED SOURCE DATA

Plotted data tabulations available from DMS on request.

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3) (R72001) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA =	.000	CONFIG =	1.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1136/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.29570	.22240	.01420	-.01320	.00410	.02890	.00340
.601	-4.000	-.25270	.19280	.01490	-.01380	.00430	.03210	.00270
.601	-2.000	-.16610	.13300	.01560	-.01370	.00430	.03620	.00190
.601	.000	-.08250	.07580	.01600	-.01360	.00460	.03750	.00210
.601	2.000	.00250	.01630	.01500	-.01230	.00420	.03810	.00030
.601	4.000	.08760	-.04260	.01300	-.01060	.00420	.03730	-.00100
.601	6.000	.16490	-.09770	.01170	-.00960	.00400	.03250	-.00180
.601	8.000	.25830	-.16380	.01300	-.01020	.00570	.03040	-.00430
.601	10.000	.34510	-.22620	.01320	-.01020	.00620	.02770	-.00470
	GRADIENT	.04254	-.02941	-.00010	.00028	.00001	.00091	-.00045

RUN NO. 1002/ 0 RN/L = 6.53 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.31920	.25040	.01610	-.01540	.00400	.02660	.02320
.899	-4.000	-.28050	.22390	.01750	-.01560	.00410	.02850	.02210
.899	-2.000	-.19300	.16310	.01670	-.01460	.00370	.03100	.02060
.899	.000	-.10750	.10490	.01500	-.01280	.00330	.03270	.01980
.899	2.000	-.02010	.04520	.01480	-.01230	.00450	.03150	.01870
.899	4.000	.06230	-.01120	.01460	-.01170	.00440	.02710	.01940
.899	6.000	.15780	-.07870	.01520	-.01180	.00500	.02180	.01990
.899	8.000	.24750	-.14110	.01420	-.01160	.00490	.02320	.01970
.899	10.000	.33510	-.20390	.01320	-.01070	.00560	.02580	.01830
	GRADIENT	.04271	-.02928	-.00028	.00047	.00005	.00017	-.00045

RUN NO. 1003/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.36020	.30300	.01760	-.01590	.00460	.04800	.03090
.997	-4.000	-.31750	.27190	.01800	-.01590	.00450	.05060	.02960
.997	-2.000	-.22950	.20890	.01770	-.01530	.00470	.05060	.02900
.997	.000	-.13390	.14100	.01580	-.01350	.00460	.04980	.03020
.997	2.000	-.03330	.06970	.01540	-.01250	.00490	.05030	.02930
.997	4.000	.07880	-.01020	.01450	-.01150	.00550	.04650	.03050
.997	6.000	.20410	-.10600	.01410	-.01150	.00550	.03860	.02840
.997	8.000	.31220	-.18510	.01490	-.01240	.00580	.03910	.03070
.997	10.000	.37230	-.22770	.01480	-.01250	.00540	.03690	.02830
	GRADIENT	.04848	-.03455	-.00040	.00053	.00009	-.00017	-.00001

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3) (R72001) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	1.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1001/ 1 RN/L = 7.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.206	-5.000	-.31460	.27980	.01160	-.01020	.00240	.06400	.03390
1.206	-4.000	-.26850	.24490	.01250	-.01050	.00300	.06560	.03290
1.206	-2.000	-.16420	.16750	.01090	-.00870	.00300	.06530	.03310
1.206	.000	-.05050	.08270	.01190	-.00960	.00400	.07270	.03180
1.206	2.000	.06080	-.00090	.00910	-.00690	.00400	.07250	.03230
1.206	4.000	.16350	-.07830	.00860	-.00640	.00420	.07640	.03060
1.206	6.000	.27100	-.15760	.00940	-.00700	.00490	.07880	.02810
1.206	8.000	.37350	-.23410	.00860	-.00670	.00500	.08350	.02250
1.206	10.000	.46950	-.30470	.00990	-.00750	.00540	.08720	.01490
	GRADIENT	.05380	-.04026	-.00038	.00045	.00020	.00139	-.00030

RUN NO. 1166/ 0 RN/L = 6.52 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.24920	.22130	.01010	-.00870	.00240	.06800	.02270
1.461	-4.000	-.20000	.18380	.00870	-.00780	.00200	.07110	.02110
1.461	-2.000	-.10620	.11340	.00800	-.00670	.00220	.07620	.01880
1.461	.000	-.01190	.04330	.00850	-.00680	.00300	.07740	.01940
1.461	2.000	.07580	-.02220	.00760	-.00580	.00300	.07700	.02040
1.461	4.000	.16280	-.08620	.00660	-.00440	.00280	.07670	.02080
1.461	6.000	.25760	-.15590	.00490	-.00320	.00250	.07650	.02000
1.461	8.000	.34200	-.21820	.00380	-.00230	.00240	.07920	.01760
1.461	10.000	.41570	-.27280	.00200	-.00070	.00210	.08260	.01520
	GRADIENT	.04582	-.03419	-.00030	.00042	.00009	.00092	-.00015

RUN NO. 1221/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.18860	.16630	.01390	-.01050	.00400	.06870	.01470
1.954	-4.000	-.14830	.13530	.01320	-.00990	.00390	.06820	.01470
1.954	-2.000	-.07780	.08360	.01360	-.01000	.00420	.07130	.01370
1.954	.000	-.00190	.02810	.01220	-.00890	.00390	.07190	.01410
1.954	2.000	.07150	-.02620	.01080	-.00740	.00370	.07230	.01370
1.954	4.000	.14190	-.07700	.01000	-.00680	.00340	.07600	.01220
1.954	6.000	.20650	-.12420	.00910	-.00600	.00340	.07920	.01070
1.954	8.000	.26880	-.16970	.00840	-.00540	.00350	.08170	.00960
1.954	10.000	.32160	-.20850	.00750	-.00460	.00340	.08360	.00860
	GRADIENT	.03671	-.02699	-.00044	.00042	-.00006	.00077	-.00023

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72001) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1263/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.05080	.04970	.01210	-.00590	.00490	.06750	.00330
4.960	-4.000	-.05160	.04750	.01110	-.00590	.00390	.06490	.00310
4.960	-2.000	-.04460	.03850	.00940	-.00560	.00240	.06010	.00260
4.960	.000	-.02650	.02360	.00840	-.00520	.00200	.05630	.00210
4.960	2.000	.00400	.00230	.00810	-.00470	.00270	.05340	.00160
4.960	4.000	.02650	-.01690	.00880	-.00540	.00250	.05220	.00130
4.960	6.000	.04430	-.02830	.00660	-.00380	.00180	.04930	.00110
4.960	8.000	.06720	-.04980	.00510	-.00230	.00180	.04660	.00100
4.960	10.000	.08010	-.06250	.00580	-.00260	.00240	.04270	.00090
	GRADIENT	.00895	-.00753	-.00040	.00010	-.00023	-.00175	-.00023

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72002) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	1.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1035/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.34530	.25620	.01300	-.01270	.00420	.03380	.00460
.600	-4.000	-.30300	.22740	.01540	-.01410	.00470	.03620	.00320
.600	-2.000	-.21140	.16260	.01450	-.01330	.00400	.03910	.00230
.600	.000	-.12460	.10250	.01440	-.01280	.00420	.04090	.00130
.600	2.000	-.04190	.04580	.01470	-.01250	.00460	.04060	.00050
.600	4.000	.04530	-.01600	.01190	-.01010	.00390	.03940	-.00050
.600	6.000	.13160	-.07720	.00960	-.00830	.00370	.03500	-.00200
.600	8.000	.22720	-.14520	.01240	-.01000	.00450	.03000	-.00440
.600	10.000	.31890	-.21150	.01120	-.00950	.00470	.02490	-.00580
	GRADIENT	.04347	-.03024	-.00014	.00030	-.00003	.00063	-.00052

RUN NO. 1034/ 0 RN/L = 6.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.37300	.28830	.01560	-.01440	.00410	.03870	.02070
.899	-4.000	-.33070	.25780	.01570	-.01410	.00390	.03780	.02010
.899	-2.000	-.23380	.18900	.01530	-.01330	.00330	.03930	.01750
.899	.000	-.14650	.12800	.01540	-.01290	.00360	.04110	.01510
.899	2.000	-.05360	.06350	.01570	-.01280	.00380	.04060	.01310
.899	4.000	.03700	.00040	.01610	-.01320	.00450	.03510	.01250
.899	6.000	.13100	-.06670	.01550	-.01270	.00360	.02990	.00910
.899	8.000	.24410	-.15130	.01800	-.01490	.00490	.02980	.00230
.899	10.000	.34080	-.22450	.02090	-.01750	.00630	.03300	-.00320
	GRADIENT	.04568	-.03205	.00004	.00015	.00004	-.00013	-.00099

RUN NO. 1032/ 0 RN/L = 6.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.995	-5.000	-.42920	.35270	.01640	-.01490	.00470	.05020	.02710
.995	-4.000	-.37870	.31630	.01640	-.01450	.00440	.06210	.02640
.995	-2.000	-.27330	.23720	.01530	-.01320	.00380	.05950	.02320
.995	.000	-.17000	.16050	.01490	-.01270	.00430	.05740	.02100
.995	2.000	-.06910	.08670	.01470	-.01210	.00460	.05300	.01880
.995	4.000	.03530	.01050	.01620	-.01310	.00520	.04520	.01500
.995	6.000	.14460	-.07150	.01800	-.01490	.00620	.03640	.01060
.995	8.000	.22260	-.12900	.02000	-.01690	.00570	.03050	.00120
.995	10.000	.29100	-.17990	.02230	-.01870	.00550	.02980	-.00820
	GRADIENT	.05161	-.03810	-.00009	.00025	.00006	-.00151	-.00148

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72002) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1033/ 1 RN/L = 6.57 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.37850	.32730	.01170	-.01030	.00280	.07680	.02970
1.199	-4.000	-.32410	.28610	.01180	-.01020	.00290	.07690	.02920
1.199	-2.000	-.20690	.19700	.01210	-.01000	.00330	.07750	.02740
1.199	.000	-.08990	.10780	.01160	-.00940	.00380	.08030	.02400
1.199	2.000	.03010	.01700	.01120	-.00920	.00420	.08270	.01920
1.199	4.000	.13780	-.06490	.01630	-.01260	.00650	.08580	.01090
1.199	6.000	.24660	-.14650	.01400	-.01130	.00580	.09080	.00240
1.199	8.000	.37100	-.24540	.01510	-.01330	.00600	.10150	-.01720
1.199	10.000	.49430	-.33780	.02490	-.02010	.00750	.10340	-.03390
	GRADIENT	.05788	-.04398	.00033	-.00013	.00036	.00102	-.00199

RUN NO. 1172/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.30680	.26410	.01070	-.00930	.00230	.07320	.02200
1.461	-4.000	-.26070	.22900	.01000	-.00870	.00230	.07560	.02000
1.461	-2.000	-.16590	.15710	.00960	-.00800	.00250	.07690	.01940
1.461	.000	-.07080	.08580	.00900	-.00720	.00290	.07780	.01890
1.461	2.000	.02910	.01160	.00860	-.00660	.00330	.07750	.01900
1.461	4.000	.11940	-.05530	.00600	-.00450	.00260	.07630	.01850
1.461	6.000	.20920	-.12260	.00540	-.00380	.00240	.07600	.01610
1.461	8.000	.30060	-.19020	.00230	-.00100	.00230	.07650	.01340
1.461	10.000	.37910	-.24930	-.00070	.00100	.00190	.07620	.01210
	GRADIENT	.04764	-.03570	-.00044	.00048	.00007	.00031	-.00031

RUN NO. 1220/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.22490	.19260	.01430	-.01090	.00380	.07350	.01560
1.954	-4.000	-.19210	.16740	.01430	-.01070	.00410	.07210	.01540
1.954	-2.000	-.12740	.11940	.01350	-.01010	.00410	.07160	.01460
1.954	.000	-.05240	.06410	.01270	-.00940	.00420	.07190	.01450
1.954	2.000	.02610	.00530	.01130	-.00820	.00380	.07130	.01410
1.954	4.000	.09620	-.04590	.01150	-.00790	.00400	.07300	.01250
1.954	6.000	.16530	-.09690	.00950	-.00620	.00350	.07530	.01160
1.954	8.000	.22650	-.14250	.00830	-.00540	.00330	.07720	.00990
1.954	10.000	.27940	-.18170	.00770	-.00490	.00320	.07830	.00880
	GRADIENT	.03599	-.02672	-.00037	.00036	-.00000	-.00005	-.00030

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3) (R72002) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	1.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1262/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.09280	.06940	.00950	-.00640	.00160	.06330	.00250
4.960	-4.000	-.08400	.06470	.00930	-.00600	.00170	.06270	.00270
4.960	-2.000	-.06540	.05280	.00900	-.00550	.00190	.06070	.00280
4.960	.000	-.04450	.03730	.00850	-.00500	.00200	.05770	.00270
4.960	2.000	-.02080	.01780	.00760	-.00440	.00210	.05340	.00220
4.960	4.000	.00830	-.00470	.00930	-.00530	.00270	.05110	.00160
4.960	6.000	.02490	-.01960	.00640	-.00340	.00190	.04840	.00140
4.960	8.000	.04590	-.03660	.00660	-.00320	.00200	.04530	.00120
4.960	10.000	.06190	-.05050	.00610	-.00300	.00230	.04030	.00120
	GRADIENT	.01106	-.00817	-.00010	.00016	.00011	-.00143	-.00010

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3) (R72003) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1054/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.599	-5.000	-.22940	.17780	.02010	-.01750	.00460	.02840	.00330
.599	-4.000	-.18290	.14610	.01840	-.01580	.00570	.03240	.00330
.599	-2.000	-.09080	.08200	.01490	-.01280	.00550	.03790	.00150
.599	.000	-.02300	.03730	.01420	-.01210	.00530	.04000	.00070
.599	2.000	.05400	-.01490	.01570	-.01270	.00540	.04140	-.00130
.599	4.000	.12980	-.06910	.01180	-.00970	.00370	.03830	-.00260
.599	6.000	.22160	-.13210	.01270	-.01000	.00510	.03580	-.00220
.599	8.000	.31630	-.19800	.01220	-.00940	.00640	.03490	-.00300
.599	10.000	.39470	-.25420	.01050	-.00800	.00620	.03640	-.00410
	GRADIENT	.03949	-.02703	-.00076	.00074	-.00010	.00116	-.00068

RUN NO. 1055/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.24100	.19490	.01410	-.01280	.00270	.03110	.01770
.900	-4.000	-.18530	.15590	.01400	-.01210	.00290	.03320	.01770
.900	-2.000	-.10330	.10040	.01380	-.01160	.00340	.03610	.01660
.900	.000	-.02280	.04640	.01090	-.00930	.00260	.03590	.01670
.900	2.000	.05500	-.00460	.01300	-.00990	.00420	.03350	.01680
.900	4.000	.13110	-.05550	.01050	-.00780	.00390	.02530	.02260
.900	6.000	.21520	-.11200	.01240	-.00840	.00500	.02320	.02530
.900	8.000	.29190	-.16210	.00850	-.00580	.00470	.02520	.02960
.900	10.000	.36850	-.21510	.00510	-.00340	.00450	.02720	.03200
	GRADIENT	.04080	-.02738	-.00037	.00052	.00014	-.00049	.00035

RUN NO. 1056/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.994	-5.000	-.26860	.23480	.01750	-.01430	.00450	.06090	.01730
.994	-4.000	-.20390	.17780	.01630	-.01420	.00360	.05060	.01050
.994	-2.000	-.11100	.11290	.01590	-.01350	.00450	.05140	.01280
.994	.000	-.02070	.04980	.01310	-.01120	.00420	.04810	.01340
.994	2.000	.06490	-.00780	.01320	-.01060	.00410	.04470	.01570
.994	4.000	.16330	-.07350	.01120	-.00870	.00490	.04170	.02160
.994	6.000	.27200	-.15180	.00960	-.00690	.00400	.03780	.02660
.994	8.000	.35560	-.20890	.00930	-.00710	.00490	.04580	.03330
.994	10.000	.41150	-.24690	.00390	-.00270	.00570	.04690	.03550
	GRADIENT	.04685	-.03302	-.00067	.00064	.00006	-.00174	.00065

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72003) (22 FEB 73

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1057/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.195	-5.000	-.21270	.20420	.01300	-.01170	.00360	.07080	.02540
1.195	-4.000	-.15620	.16240	.01210	-.01130	.00420	.07390	.02390
1.195	-2.000	-.05750	.08990	.01430	-.01260	.00580	.07670	.02300
1.195	.000	.04070	.02060	.01380	-.01180	.00590	.07860	.02900
1.195	2.000	.14070	-.05260	.01060	-.00860	.00550	.07780	.03260
1.195	4.000	.23060	-.11850	.00860	-.00650	.00480	.07840	.03680
1.195	6.000	.32700	-.18920	.00910	-.00670	.00560	.07920	.03970
1.195	8.000	.41880	-.25450	.00750	-.00560	.00550	.08060	.04230
1.195	10.000	.49430	-.30890	.00150	-.00110	.00430	.08540	.04240
	GRADIENT	.04923	-.03575	-.00043	.00055	.00014	.00076	.00141

RUN NO. 1178/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.16190	.15660	.01120	-.00930	.00330	.06930	.02060
1.462	-4.000	-.11450	.12070	.01070	-.00860	.00260	.07190	.01970
1.462	-2.000	-.02300	.05220	.00980	-.00730	.00250	.07810	.01750
1.462	.000	.06850	-.01520	.00840	-.00610	.00310	.08100	.01790
1.462	2.000	.15350	-.07810	.00580	-.00420	.00240	.08270	.01790
1.462	4.000	.23680	-.13840	.00680	-.00430	.00290	.08370	.01880
1.462	6.000	.33020	-.20560	.00490	-.00300	.00260	.08530	.01910
1.462	8.000	.40770	-.26080	.00430	-.00240	.00210	.09010	.01780
1.462	10.000	.47750	-.31140	.00340	-.00140	.00210	.09680	.01530
	GRADIENT	.04439	-.03285	-.00059	.00060	-.00002	.00162	-.00020

RUN NO. 1217/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.956	-5.000	-.12000	.11640	.01270	-.00940	.00360	.06410	.01700
1.956	-4.000	-.08250	.08880	.01350	-.00980	.00380	.06610	.01630
1.956	-2.000	-.00640	.03270	.01300	-.00960	.00370	.06980	.01530
1.956	.000	.06650	-.02010	.01180	-.00810	.00350	.07280	.01410
1.956	2.000	.13470	-.06970	.01080	-.00700	.00360	.07570	.01370
1.956	4.000	.20430	-.11860	.01030	-.00680	.00340	.08190	.01220
1.956	6.000	.26750	-.16410	.01000	-.00660	.00370	.08740	.00990
1.956	8.000	.33330	-.21160	.00990	-.00630	.00380	.09430	.00700
1.956	10.000	.38930	-.25240	.00870	-.00530	.00380	.09750	.00560
	GRADIENT	.03605	-.02617	-.00034	.00036	-.00003	.00186	-.00051

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72003) (22 FEB 73)

REFERENCE DATA

$REF	= 3220.0000 SQ.FT.	XMRP	= .0000		
LREF	= 1328.0000 IN.	YMRP	= .0000		
$REF	= 1328.0000 IN.	ZMRP	= .0000		
$CALE	= 100.0000 PERCNT				

PARAMETRIC DATA

BETA	= .000	CONFIG	= 1.000
RUDDER	= .000	AILRON	= .000
ORBINC	= 1.500	DELTAZ	= .120
RUDFLR	= 10.000	ELEVTR	= .000

RUN NO. 1259/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.05270	.05090	.02830	-.01480	.01030	.07180	.00330
4.960	-4.000	-.03910	.03780	.02170	-.01180	.00760	.06740	.00270
4.960	-2.000	-.01350	.01420	.01180	-.00720	.00350	.06040	.00170
4.960	.000	.00980	-.00550	.00700	-.00510	.00170	.05610	.00110
4.960	2.000	.02840	-.01980	.00860	-.00620	.00230	.05420	.00100
4.960	4.000	.05840	-.04000	.00750	-.00470	.00270	.05740	.00000
4.960	6.000	.09050	-.06100	.01030	-.00570	.00400	.05530	.00020
4.960	8.000	.10420	-.07500	.00840	-.00480	.00310	.05140	.00000
4.960	10.000	.10530	-.08100	.00700	-.00410	.00240	.04680	-.00020
	GRADIENT	.01200	-.00990	-.00220	.00103	-.00082	-.00173	-.00034

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3) (R72004) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1123/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.29960	.22560	.02160	-.01890	.00710	.03200	.00200
.598	-4.000	-.25020	.19240	.01720	-.01510	.00570	.03430	.00060
.598	-2.000	-.16930	.13650	.01860	-.01590	.00590	.03950	-.00110
.598	.000	-.08750	.08060	.01580	-.01370	.00530	.04100	-.00090
.598	2.000	-.00070	.02080	.01770	-.01430	.00540	.04230	-.00220
.598	4.000	.08760	-.04060	.01440	-.01210	.00490	.03990	-.00310
.598	6.000	.17010	-.09900	.01340	-.01070	.00500	.03590	-.00440
.598	8.000	.26030	-.16330	.01150	-.00960	.00490	.03280	-.00690
.598	10.000	.34690	-.22490	.01150	-.00940	.00550	.03000	-.00800
	GRADIENT	.04252	-.02924	-.00055	.00057	-.00018	.00097	-.00051

RUN NO. 1122/ 0 RN/L = 6.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.29210	.22710	.01570	-.01480	.00390	.03820	.01280
.900	-4.000	-.25390	.20030	.01830	-.01580	.00440	.03830	.01360
.900	-2.000	-.16450	.14000	.01860	-.01570	.00480	.04090	.01280
.900	.000	-.08400	.08660	.01670	-.01410	.00440	.04010	.01290
.900	2.000	-.00240	.03170	.01600	-.01310	.00450	.03880	.01180
.900	4.000	.08090	-.02550	.01610	-.01290	.00490	.03370	.01170
.900	6.000	.17400	-.09070	.01530	-.01200	.00510	.02950	.01130
.900	8.000	.25940	-.15040	.01480	-.01180	.00500	.02860	.01150
.900	10.000	.34500	-.21130	.01370	-.01090	.00550	.03020	.01090
	GRADIENT	.04154	-.02803	-.00013	.00031	.00007	-.00036	-.00017

RUN NO. 1120/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.35380	.29750	.02260	-.01920	.00630	.06550	.02020
.996	-4.000	-.29730	.25570	.02300	-.01920	.00610	.06950	.01810
.996	-2.000	-.19230	.17690	.02040	-.01720	.00560	.06500	.01590
.996	.000	-.10430	.11500	.01900	-.01570	.00580	.06220	.01690
.996	2.000	-.01140	.05160	.01730	-.01380	.00550	.05670	.01870
.996	4.000	.09250	-.02270	.01690	-.01310	.00610	.04810	.01900
.996	6.000	.21040	-.10960	.01570	-.01230	.00650	.04440	.02190
.996	8.000	.30330	-.17670	.01530	-.01200	.00650	.03920	.02140
.996	10.000	.37680	-.22920	.01500	-.01190	.00600	.03970	.01940
	GRADIENT	.04879	-.03490	-.00073	.00075	-.00004	-.00204	-.00002

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72004) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1121/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.28750	.25770	.01280	-.01040	.00290	.08030	.02240
1.197	-4.000	-.23530	.21850	.01340	-.01050	.00330	.07950	.02320
1.197	-2.000	-.13320	.14270	.01150	-.00900	.00380	.07910	.02350
1.197	.000	-.03030	.06630	.01110	-.00850	.00430	.07910	.02330
1.197	2.000	.07480	-.01170	.00990	-.00740	.00480	.07880	.02340
1.197	4.000	.17950	-.08930	.01000	-.00710	.00490	.08040	.02200
1.197	6.000	.28160	-.16420	.01010	-.00720	.00510	.08140	.01990
1.197	8.000	.38400	-.24010	.00910	-.00660	.00510	.08480	.01500
1.197	10.000	.48030	-.31010	.01160	-.00840	.00570	.08730	.00880
	GRADIENT	.05183	-.03849	-.00039	.00041	.00023	-.00001	-.00004

RUN NO. 1196/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.24740	.22110	.01440	-.01170	.00400	.07270	.02150
1.463	-4.000	-.20400	.18840	.01230	-.01020	.00360	.07510	.02040
1.463	-2.000	-.11250	.11990	.01100	-.00880	.00340	.07680	.01990
1.463	.000	-.01710	.04920	.01000	-.00760	.00350	.07990	.01860
1.463	2.000	.07180	-.01590	.00940	-.00690	.00360	.08090	.01820
1.463	4.000	.16250	-.08240	.00860	-.00590	.00340	.08170	.01770
1.463	6.000	.25680	-.15180	.00720	-.00470	.00330	.08250	.01630
1.463	8.000	.34740	-.21860	.00570	-.00350	.00310	.08350	.01490
1.463	10.000	.42570	-.27640	.00410	-.00220	.00270	.08530	.01340
	GRADIENT	.04574	-.03386	-.00058	.00061	-.00004	.00099	-.00041

RUN NO. 1222/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.18100	.16190	.01480	-.01100	.00440	.07100	.01640
1.954	-4.000	-.14260	.13330	.01460	-.01090	.00450	.07180	.01520
1.954	-2.000	-.07400	.08330	.01420	-.01070	.00450	.07350	.01430
1.954	.000	.00400	.02590	.01330	-.00970	.00440	.07490	.01310
1.954	2.000	.07900	-.02980	.01250	-.00880	.00420	.07570	.01180
1.954	4.000	.15120	-.08200	.01170	-.00790	.00400	.08000	.00950
1.954	6.000	.22050	-.13280	.01080	-.00710	.00390	.08280	.00810
1.954	8.000	.28630	-.18150	.00940	-.00610	.00360	.08480	.00690
1.954	10.000	.34490	-.22470	.00880	-.00560	.00370	.08690	.00560
	GRADIENT	.03699	-.02717	-.00035	.00036	-.00005	.00090	-.00070

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72004) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	1.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1264/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.08710	.06350	.01340	-.00780	.00370	.07590	.00240
4.960	-4.000	-.07690	.05740	.01210	-.00700	.00340	.07150	.00230
4.960	-2.000	-.05300	.04220	.01010	-.00570	.00290	.06390	.00210
4.960	.000	-.02600	.02370	.00900	-.00510	.00270	.05830	.00180
4.960	2.000	.00350	.00160	.00900	-.00520	.00290	.05510	.00130
4.960	4.000	.02320	-.01380	.00780	-.00460	.00240	.05270	.00080
4.960	6.000	.04830	-.03390	.00680	-.00400	.00220	.05250	.00040
4.960	8.000	.07200	-.05110	.00710	-.00340	.00250	.04910	.00030
4.960	10.000	.08560	-.06370	.00600	-.00250	.00230	.04460	.00040
	GRADIENT	.01264	-.00884	-.00058	.00033	-.00012	-.00259	-.00018

MSFC 545 (1A1) MOD ATP LV-(01)/(T3) (R72005) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1098/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.604	-5.000	-.35530	.26610	.01570	-.01290	.00610	.03910	.00400
.604	-4.000	-.31120	.23520	.01210	-.01080	.00460	.04310	.00080
.604	-2.000	-.22080	.17210	.01220	-.01070	.00390	.04450	.00130
.604	.000	-.14110	.11760	.00990	-.00870	.00380	.04770	-.00080
.604	2.000	-.05380	.05840	.01170	-.00940	.00390	.04680	-.00120
.604	4.000	.03920	-.00620	.01220	-.00940	.00460	.04490	-.00290
.604	6.000	.11300	-.05860	.01150	-.00850	.00480	.04040	-.00340
.604	8.000	.19480	-.11850	.00860	-.00650	.00420	.03560	-.00570
.604	10.000	.29420	-.19040	.00740	-.00600	.00440	.03120	-.00830
	GRADIENT	.04345	-.02993	-.00029	.00035	-.00013	.00063	-.00064

RUN NO. 1099/ 0 RN/L = 6.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.37490	.29120	.00840	-.00800	.00220	.04880	.01710
.899	-4.000	-.33070	.25980	.01130	-.00960	.00310	.04900	.01570
.899	-2.000	-.24340	.19950	.01210	-.00960	.00320	.04810	.01490
.899	.000	-.15870	.14200	.01130	-.00850	.00310	.04500	.01580
.899	2.000	-.07860	.08730	.00900	-.00630	.00270	.04420	.01420
.899	4.000	.01080	.02560	.00690	-.00570	.00330	.03990	.01290
.899	6.000	.10020	-.03740	.00800	-.00510	.00290	.03150	.01320
.899	8.000	.20350	-.11290	.00810	-.00560	.00350	.02740	.01070
.899	10.000	.29790	-.18250	.00960	-.00720	.00430	.02700	.00820
	GRADIENT	.04258	-.02925	-.00011	.00037	.00006	-.00097	-.00037

RUN NO. 1100/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.42270	.35000	.01510	-.01280	.00530	.07930	.01840
.996	-4.000	-.36990	.31090	.01570	-.01300	.00490	.07960	.01850
.996	-2.000	-.26550	.23270	.01160	-.00930	.00350	.06910	.01870
.996	.000	-.17490	.16860	.00960	-.00750	.00330	.06630	.02030
.996	2.000	-.08460	.10430	.00850	-.00590	.00340	.06270	.01900
.996	4.000	.01510	.03330	.00760	-.00470	.00370	.05270	.01990
.996	6.000	.13380	-.05430	.00790	-.00520	.00430	.04370	.02130
.996	8.000	.21790	-.11730	.00980	-.00700	.00450	.03340	.01190
.996	10.000	.30170	-.17980	.00930	-.00680	.00450	.03270	.00650
	GRADIENT	.04816	-.03481	-.00094	.00098	-.00019	-.00288	.00016

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72005) (22 FEB 73

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1101/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.37320	.32550	.01030	-.00860	.00370	.08740	.02450
1.197	-4.000	-.31820	.28460	.01130	-.00940	.00370	.08500	.02550
1.197	-2.000	-.21220	.20450	.01030	-.00840	.00460	.08270	.02510
1.197	.000	-.09930	.11930	.00960	-.00770	.00470	.07990	.02490
1.197	2.000	.01960	.02920	.01070	-.00790	.00510	.08000	.02230
1.197	4.000	.12570	-.05040	.01220	-.00900	.00590	.07920	.01870
1.197	6.000	.23280	-.13110	.01140	-.00840	.00560	.08210	.01170
1.197	8.000	.34920	-.22110	.01250	-.00980	.00590	.08790	-.00110
1.197	10.000	.46110	-.30490	.01680	-.01310	.00660	.09060	-.01340
	GRADIENT	.05573	-.04204	.00011	.00005	.00024	-.00088	-.00062

RUN NO. 1190/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.469	-5.000	-.30870	.26660	.01250	-.01040	.00360	.07740	.02170
1.469	-4.000	-.26400	.23310	.01220	-.00990	.00360	.07930	.02020
1.469	-2.000	-.17530	.16640	.01130	-.00910	.00370	.07910	.02020
1.469	.000	-.07950	.09440	.00940	-.00750	.00320	.08000	.01940
1.469	2.000	.01380	.02560	.00960	-.00700	.00360	.07920	.01900
1.469	4.000	.10700	-.04320	.00860	-.00610	.00340	.07810	.01860
1.469	6.000	.20130	-.11320	.00770	-.00520	.00320	.07690	.01620
1.469	8.000	.29330	-.18120	.00610	-.00370	.00290	.07880	.01420
1.469	10.000	.37480	-.24190	.00400	-.00210	.00270	.07840	.01270
	GRADIENT	.04630	-.03453	-.00045	.00049	-.00002	.00004	-.00030

RUN NO. 1219/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.951	-5.000	-.24360	.20890	.01590	-.01190	.00480	.07710	.01570
1.951	-4.000	-.19830	.17450	.01520	-.01130	.00460	.07620	.01540
1.951	-2.000	-.12400	.11970	.01460	-.01080	.00460	.07610	.01490
1.951	.000	-.05080	.06620	.01370	-.01010	.00460	.07590	.01420
1.951	2.000	.02700	.00750	.01250	-.00900	.00420	.07450	.01300
1.951	4.000	.10150	-.04730	.01200	-.00840	.00410	.07620	.01080
1.951	6.000	.17370	-.10090	.01100	-.00730	.00390	.07880	.00880
1.951	8.000	.24100	-.15080	.01040	-.00670	.00380	.08010	.00720
1.951	10.000	.29920	-.19410	.00950	-.00610	.00370	.08110	.00590
	GRADIENT	.03801	-.02819	-.00044	.00039	-.00007	-.00014	-.00050

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3) (R72005) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	1.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1261/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.09590	.07360	.01030	-.00630	-.00480	.06860	.00280
4.960	-4.000	-.08630	.06710	.01030	-.00610	-.00250	.06720	.00270
4.960	-2.000	-.06640	.05300	.00970	-.00560	.00070	.06370	.00240
4.960	.000	-.04520	.03720	.00870	-.00500	.00230	.05960	.00210
4.960	2.000	-.02370	.02010	.00680	-.00400	.00190	.05500	.00170
4.960	4.000	.00700	-.00200	.00810	-.00450	.00260	.05270	.00100
4.960	6.000	.03080	-.02130	.00650	-.00350	.00200	.05110	.00080
4.960	8.000	.05100	-.03840	.00530	-.00250	.00190	.04720	.00070
4.960	10.000	.06600	-.05180	.00450	-.00170	.00200	.04380	.00080
	GRADIENT	.01117	-.00826	-.00035	.00024	.00077	-.00185	-.00019

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72006) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1079/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.22230	.17400	.02090	-.01720	.00610	.03090	.00140
.601	-4.000	-.18050	.14480	.01960	-.01660	.00620	.03330	.00160
.601	-2.000	-.09250	.08470	.01830	-.01530	.00640	.03870	.00000
.601	.000	-.01630	.03350	.01750	-.01440	.00610	.04110	-.00090
.601	2.000	.06130	-.01990	.01680	-.01350	.00580	.04250	-.00290
.601	4.000	.14390	-.07760	.01460	-.01170	.00510	.04120	-.00400
.601	6.000	.23470	-.14100	.01460	-.01130	.00580	.03800	-.00450
.601	8.000	.32750	-.20610	.01310	-.01020	.00630	.03710	-.00560
.601	10.000	.40770	-.26270	.01210	-.00940	.00640	.03820	-.00680
	GRADIENT	.04046	-.02771	-.00062	.00058	-.00010	.00122	-.00064

RUN NO. 1078/ 0 RN/L = 6.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.23880	.19460	.01880	-.01570	.00430	.03070	.01800
.903	-4.000	-.19000	.16000	.01710	-.01440	.00400	.03260	.01740
.903	-2.000	-.10430	.10150	.01690	-.01400	.00420	.03680	.01500
.903	.000	-.02010	.04500	.01530	-.01250	.00400	.03660	.01510
.903	2.000	.06030	-.00900	.01520	-.01190	.00480	.03530	.01400
.903	4.000	.14690	-.06790	.01510	-.01160	.00490	.03080	.01560
.903	6.000	.23450	-.12750	.01510	-.01130	.00550	.02950	.01730
.903	8.000	.31320	-.17990	.01240	-.00930	.00540	.03190	.01970
.903	10.000	.39370	-.23560	.00950	-.00700	.00540	.03460	.02100
	GRADIENT	.04245	-.02880	-.00038	.00045	.00008	.00009	-.00033

RUN NO. 1077/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.28440	.25360	.01720	-.01440	.00520	.05780	.03070
.997	-4.000	-.22680	.20680	.01700	-.01430	.00480	.05580	.02520
.997	-2.000	-.12430	.13230	.01710	-.01400	.00520	.05770	.02240
.997	.000	-.03010	.06580	.01570	-.01280	.00520	.05650	.02110
.997	2.000	.06690	-.00170	.01600	-.01260	.00540	.05290	.02130
.997	4.000	.17650	-.07950	.01490	-.01150	.00610	.04940	.02310
.997	6.000	.28940	-.16160	.01310	-.00990	.00570	.04800	.02560
.997	8.000	.37910	-.22410	.01310	-.01010	.00580	.05140	.02960
.997	10.000	.44670	-.27070	.01080	-.00850	.00550	.05380	.03030
	GRADIENT	.05040	-.03617	-.00025	.00032	.00010	-.00081	-.00073

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72006) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1076/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.20930	.19800	.01510	-.01180	.00400	.06870	.02660
1.199	-4.000	-.15650	.15870	.01360	-.01090	.00400	.07160	.02530
1.199	-2.000	-.05290	.08280	.01380	-.01080	.00490	.07570	.02380
1.199	.000	.04990	.00820	.01300	-.00990	.00530	.07940	.02500
1.199	2.000	.15420	-.06770	.01080	-.00780	.00510	.08020	.02660
1.199	4.000	.25050	-.13760	.00890	-.00600	.00470	.08210	.02830
1.199	6.000	.34830	-.20780	.00890	-.00590	.00530	.08320	.02960
1.199	8.000	.43710	-.27040	.00710	-.00450	.00500	.08560	.03120
1.199	10.000	.51710	-.32650	.00420	-.00240	.00430	.08960	.03040
	GRADIENT	.05126	-.03738	-.00062	.00061	.00011	.00146	.00023

RUN NO. 1184/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.16740	.16230	.01240	-.01000	.00380	.06940	.02160
1.462	-4.000	-.12200	.12830	.01200	-.00960	.00350	.07290	.01990
1.462	-2.000	-.02790	.05830	.01100	-.00830	.00350	.07950	.01720
1.462	.000	.06450	-.00930	.00990	-.00720	.00370	.08370	.01640
1.462	2.000	.15330	-.07450	.00840	-.00580	.00330	.08650	.01580
1.462	4.000	.24090	-.13810	.00830	-.00530	.00340	.08820	.01600
1.462	6.000	.33440	-.20590	.00660	-.00400	.00320	.09030	.01560
1.462	8.000	.41720	-.26560	.00570	-.00340	.00280	.09430	.01420
1.462	10.000	.49160	-.31940	.00470	-.00230	.00260	.09980	.01220
	GRADIENT	.04552	-.03348	-.00050	.00055	-.00004	.00211	-.00061

RUN NO. 1218/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.955	-5.000	-.11830	.11600	.01440	-.01080	.00440	.06730	.01680
1.955	-4.000	-.07960	.08720	.01480	-.01090	.00450	.06890	.01580
1.955	-2.000	-.00440	.03190	.01400	-.01030	.00430	.07280	.01390
1.955	.000	.07040	-.02240	.01280	-.00890	.00410	.07600	.01250
1.955	2.000	.14030	-.07320	.01200	-.00800	.00400	.07900	.01140
1.955	4.000	.21100	-.12310	.01120	-.00750	.00390	.08560	.00930
1.955	6.000	.27670	-.17050	.01060	-.00690	.00390	.09050	.00730
1.955	8.000	.34280	-.21840	.00990	-.00630	.00390	.09560	.00550
1.955	10.000	.40080	-.26060	.00900	-.00550	.00400	.09850	.00410
	GRADIENT	.03659	-.02659	-.00040	.00041	-.00007	.00193	-.00080

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72006) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	1.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1260/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.06760	.05710	.01720	-.00950	.00570	.07270	.00270
4.960	-4.000	-.05320	.04490	.01450	-.00810	.00470	.06880	.00230
4.960	-2.000	-.02510	.02210	.01040	-.00620	.00310	.06230	.00170
4.960	.000	.00150	.00160	.00850	-.00540	.00250	.05780	.00120
4.960	2.000	.02600	-.01600	.00940	-.00600	.00290	.05520	.00090
4.960	4.000	.05370	-.03470	.00790	-.00460	.00290	.05530	.00030
4.960	6.000	.08110	-.05390	.00820	-.00450	.00320	.05370	.00000
4.960	8.000	.10160	-.07070	.00620	-.00340	.00250	.05060	-.00010
4.960	10.000	.11180	-.08060	.00510	-.00260	.00230	.04710	-.00010
	GRADIENT	.01338	-.01015	-.00095	.00047	-.00029	-.00200	-.00026

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72007) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	1.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2321/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.660	-.09300	.08190	.10300	-.07060	.03340	.02060	.01670
.601	-3.630	-.08780	.08070	.06730	-.04700	.02290	.02130	.01750
.601	-1.560	-.08600	.08090	.03270	-.02360	.01250	.02180	.01820
.601	.490	-.08230	.07920	-.00150	-.00050	.00250	.02060	.01970
.601	2.550	-.08210	.07940	-.03750	.02430	-.00800	.01930	.02140
.601	4.600	-.07890	.07570	-.07270	.04890	-.01910	.01870	.01990
.601	6.630	-.08870	.08000	-.10640	.07160	-.02900	.01660	.01990
.601	.480	-.08280	.07990	.00010	-.00120	.00230	.02140	.01920
	GRADIENT	.00105	-.00056	-.01702	.01165	-.00508	-.00037	.00039

RUN NO. 2322/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.800	-.08370	.08770	.11540	-.07890	.04050	.02770	.02820
.903	-3.710	-.07770	.08510	.07620	-.05310	.02810	.02870	.02870
.903	-1.600	-.07120	.08250	.03840	-.02680	.01500	.03000	.02890
.903	.470	-.07130	.08410	.00110	-.00100	.00210	.02970	.02980
.903	2.590	-.06960	.08210	-.03750	.02570	-.01160	.02870	.02950
.903	4.680	-.07520	.08330	-.07880	.05450	-.02590	.02530	.02990
.903	6.760	-.08420	.08880	-.11560	.07890	-.03820	.02490	.02890
.903	.480	-.06740	.07990	.00060	-.00100	.00140	.02880	.02860
	GRADIENT	.00032	-.00019	-.01840	.01277	-.00642	-.00039	.00014

RUN NO. 2324/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.830	-.10390	.11870	.11420	-.07750	.04580	.05550	.03540
1.000	-3.730	-.09730	.11860	.07240	-.04950	.02990	.05870	.03760
1.000	-1.600	-.09300	.11730	.03170	-.02150	.01430	.06000	.03720
1.000	.490	-.09140	.11530	-.00630	.00420	-.00040	.05650	.03780
1.000	2.610	-.08790	.10990	-.04470	.03070	-.01520	.05300	.03600
1.000	4.700	-.09830	.11650	-.08260	.05650	-.03050	.05490	.03840
1.000	6.790	-.10020	.11640	-.12430	.08440	-.04660	.05060	.03720
1.000	.490	-.09220	.11680	-.00570	.00340	-.00020	.05710	.03960
	GRADIENT	.00015	-.00036	-.01834	.01254	-.00713	-.00069	.00002

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) (R72007) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 1.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2323/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.900	-.03380	.06710	.10980	-.07020	.04610	.06560	.03820
1.198	-3.770	-.03050	.06870	.06840	-.04350	.02980	.06760	.03750
1.198	-1.630	-.01610	.05960	.03280	-.02080	.01490	.06880	.03740
1.198	.490	-.01810	.06160	-.00310	.00130	-.00010	.06840	.03760
1.198	2.640	-.01500	.05780	-.03770	.02310	-.01490	.06750	.03830
1.198	4.750	-.01240	.05330	-.07600	.04770	-.03100	.06450	.03940
1.198	6.860	-.01560	.05240	-.11460	.07220	-.04690	.06310	.03960
1.198	.500	-.00760	.05350	-.00300	.00080	-.00030	.06820	.03850
	GRADIENT	.00175	-.00153	-.01686	.01062	-.00710	-.00035	.00022

RUN NO. 2309/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.465	-5.890	-.01260	.04440	.11380	-.07350	.04460	.06900	.03150
1.465	-3.810	.00030	.03740	.07280	-.04730	.02970	.07030	.03110
1.465	-1.630	.00620	.03470	.03110	-.01980	.01380	.07110	.03080
1.465	.500	.00990	.03260	-.00690	.00460	-.00060	.07090	.03130
1.465	2.660	.00770	.03330	-.04760	.03140	-.01600	.06910	.03270
1.465	4.770	.00230	.03510	-.08950	.05950	-.03170	.06770	.03270
1.465	6.930	-.00970	.04130	-.13150	.08590	-.04710	.06550	.03350
1.465	.490	.00850	.03330	-.00780	.00480	-.00100	.07120	.03100
	GRADIENT	.00026	-.00028	-.01880	.01234	-.00711	-.00033	.00024

RUN NO. 2302/ 0 RN/L = 6.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.970	-.01140	.03660	.11810	-.07470	.04040	.07000	.02230
1.954	-3.820	.00630	.02490	.07610	-.04870	.02630	.06820	.02200
1.954	-1.620	.01790	.01700	.03430	-.02190	.01210	.06700	.02250
1.954	.490	.02550	.01120	-.00540	.00370	-.00120	.06490	.02370
1.954	2.660	.01840	.01710	-.04460	.02910	-.01450	.06640	.02400
1.954	4.800	.00820	.02420	-.08670	.05580	-.02890	.06700	.02490
1.954	6.970	.00200	.02660	-.12760	.08040	-.04290	.06510	.02600
1.954	.500	.02370	.01190	-.00670	.00420	-.00160	.06440	.02360
	GRADIENT	.00020	-.00006	-.01880	.01208	-.00637	-.00014	.00034

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3) (R72007) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	1.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2293/ 0 RN/L = 4.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.610	-.00990	.01290	.07060	-.04200	.02010	.05590	.00290
4.960	-3.600	-.01160	.01540	.04730	-.02820	.01340	.05450	.00310
4.960	-1.520	-.01520	.01780	.02190	-.01310	.00610	.05560	.00320
4.960	.470	-.01510	.01830	-.00060	.00070	.00000	.05600	.00330
4.960	2.530	-.01350	.01690	-.02380	.01410	-.00700	.05510	.00340
4.960	4.540	-.00890	.01290	-.04930	.02910	-.01460	.05480	.00340
4.960	6.570	-.00410	.00890	-.07420	.04350	-.02200	.05410	.00350
4.960	.480	-.01430	.01740	-.00120	.00060	-.00060	.05460	.00350
	GRADIENT	.00035	-.00029	-.01175	.00697	-.00340	.00001	.00004

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72008) (22 FEB)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1134/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.603	-5.000	-.18850	.15310	.01310	-.01180	.00290	.03170	.01550
.603	-4.000	-.15360	.12810	.01380	-.01230	.00330	.03300	.01540
.603	-2.000	-.09600	.08640	.01300	-.01200	.00340	.03650	.01310
.603	.000	-.03690	.04460	.01370	-.01210	.00380	.03650	.01370
.603	2.000	.03180	-.00430	.01310	-.01110	.00410	.03810	.01160
.603	4.000	.09400	-.04980	.01280	-.01050	.00430	.03740	.01040
.603	6.000	.15650	-.09590	.01120	-.00880	.00410	.03750	.00660
.603	8.000	.21340	-.13990	.01140	-.00900	.00510	.03540	.00580
.603	10.000	.26120	-.17810	.01170	-.00930	.00570	.03520	.00410
	GRADIENT	.03119	-.02236	-.00005	.00016	.00015	.00066	-.00056

RUN NO. 1135/ 0 RN/L = 5.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.803	-5.000	-.17950	.14980	.01360	-.01270	.00170	.03310	.01890
.803	-4.000	-.14370	.12360	.01580	-.01400	.00310	.03470	.01850
.803	-2.000	-.08430	.08180	.01530	-.01360	.00320	.03740	.01720
.803	.000	-.01990	.03510	.01300	-.01140	.00280	.03470	.02100
.803	2.000	.04540	-.01150	.01520	-.01260	.00400	.03510	.02020
.803	4.000	.10700	-.05670	.01450	-.01180	.00450	.03710	.01620
.803	6.000	.17450	-.10700	.01320	-.01030	.00500	.03680	.01340
.803	8.000	.23290	-.15130	.01310	-.01020	.00550	.03660	.01150
.803	10.000	.27830	-.18760	.01260	-.00990	.00540	.03740	.01010
	GRADIENT	.03173	-.02282	-.00001	.00018	.00024	.00027	-.00007

RUN NO. 1005/ 1 RN/L = 6.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.18450	.15990	.01500	-.01380	.00350	.03600	.03110
.902	-4.000	-.14490	.13090	.01400	-.01260	.00330	.03800	.02940
.902	-2.000	-.08560	.08850	.01630	-.01390	.00460	.03580	.03240
.902	.000	-.02570	.04650	.01700	-.01420	.00480	.03590	.03180
.902	2.000	.04200	-.00230	.01360	-.01130	.00470	.03540	.03180
.902	4.000	.10530	-.04890	.01450	-.01160	.00520	.03650	.02830
.902	6.000	.17300	-.10100	.01400	-.01100	.00560	.03400	.02590
.902	8.000	.23250	-.14790	.01350	-.01080	.00580	.03650	.02170
.902	10.000	.27640	-.18550	.01270	-.01000	.00550	.04080	.01690
	GRADIENT	.03179	-.02282	-.00005	.00023	.00020	-.00009	-.00012

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72008) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1007/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.20670	.18460	.01480	-.01370	.00310	.04790	.02970
.999	-4.000	-.17090	.15660	.01190	-.01150	.00270	.04780	.02880
.999	-2.000	-.10960	.11460	.01360	-.01210	.00370	.05220	.02920
.999	.000	-.03880	.06530	.01400	-.01230	.00460	.05090	.03130
.999	2.000	.03310	.01320	.01060	-.00920	.00440	.05100	.03040
.999	4.000	.10410	-.04140	.01380	-.01120	.00560	.04930	.02830
.999	6.000	.17830	-.10140	.01530	-.01250	.00630	.04850	.02340
.999	8.000	.24170	-.15450	.01430	-.01140	.00650	.05470	.01660
.999	10.000	.29320	-.20030	.01330	-.01030	.00610	.06380	.00980
	GRADIENT	.03444	-.02477	-.00011	.00028	.00029	.00022	-.00000

RUN NO. 1006/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.18710	.18920	.01050	-.00950	.00230	.06440	.03460
1.198	-4.000	-.15040	.16110	.01010	-.00900	.00210	.06450	.03560
1.198	-2.000	-.06550	.09540	.01100	-.00950	.00310	.06540	.03640
1.198	.000	.02260	.02770	.01100	-.00890	.00410	.06670	.03700
1.198	2.000	.10400	-.03590	.01130	-.00850	.00470	.06890	.03550
1.198	4.000	.18450	-.09700	.00940	-.00660	.00500	.06900	.03360
1.198	6.000	.24470	-.14370	.00760	-.00500	.00520	.06730	.03140
1.198	8.000	.28400	-.17640	.00660	-.00430	.00540	.06870	.02660
1.198	10.000	.30980	-.20010	.00660	-.00420	.00500	.07070	.02010
	GRADIENT	.04171	-.03217	-.00003	.00026	.00035	.00058	-.00009

RUN NO. 1164/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.15760	.16510	.00630	-.00630	.00070	.06590	.02730
1.460	-4.000	-.12340	.13860	.00690	-.00630	.00110	.06670	.02750
1.460	-2.000	-.04830	.08000	.00890	-.00750	.00210	.06700	.02910
1.460	.000	.02770	.02050	.01060	-.00860	.00310	.06570	.03180
1.460	2.000	.10170	-.03790	.01010	-.00770	.00340	.06320	.03490
1.460	4.000	.17240	-.09110	.00970	-.00640	.00380	.06240	.03540
1.460	6.000	.23050	-.13590	.00930	-.00560	.00360	.06320	.03390
1.460	8.000	.27920	-.17500	.00820	-.00480	.00280	.06600	.03030
1.460	10.000	.31240	-.20220	.00710	-.00410	.00200	.07000	.02450
	GRADIENT	.03696	-.02878	.00042	-.00008	.00036	-.00047	.00101

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1) (R72008) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1209/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-5.000	-.06830	.09310	.01090	-.00890	.00260	.06280	.02410
1.962	-4.000	-.03920	.07000	.01130	-.00890	.00330	.06210	.02380
1.962	-2.000	.01340	.02770	.01200	-.00920	.00370	.06170	.02360
1.962	.000	.06950	-.01830	.01100	-.00820	.00370	.06190	.02100
1.962	2.000	.11850	-.05780	.01030	-.00750	.00340	.06170	.01890
1.962	4.000	.16390	-.09050	.01050	-.00760	.00330	.06260	.01800
1.962	6.000	.21170	-.12490	.01010	-.00700	.00310	.06760	.01490
1.962	8.000	.23150	-.13870	.01070	-.00740	.00320	.06880	.01410
1.962	10.000	.23700	-.14330	.01130	-.00760	.00350	.06720	.01400
	GRADIENT	.02596	-.02068	-.00010	.00018	.00005	-.00002	-.00074

RUN NO. 1267/ 0 RN/L = 5.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.01270	.02440	.01000	-.00700	.00160	.06740	.01120
2.990	-4.000	-.00010	.01410	.01000	-.00720	.00160	.06580	.01070
2.990	-2.000	.02180	-.00430	.01050	-.00730	.00180	.06180	.01030
2.990	.000	.04110	-.02080	.01080	-.00740	.00180	.05740	.01000
2.990	2.000	.06190	-.03810	.00950	-.00620	.00150	.05460	.00930
2.990	4.000	.09660	-.06320	.00970	-.00620	.00230	.05310	.00890
2.990	6.000	.12510	-.08460	.00950	-.00600	.00260	.05170	.00810
2.990	8.000	.13360	-.09160	.00900	-.00580	.00300	.04960	.00760
2.990	10.000	.13430	-.09240	.00910	-.00590	.00350	.04560	.00780
	GRADIENT	.01158	-.00940	-.00005	.00011	.00005	-.00168	-.00024

RUN NO. 1268/ 0 RN/L = 5.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.01070	.01590	.01730	-.00780	.00370	.07300	.00160
4.960	-4.000	-.01300	.01530	.01330	-.00630	.00280	.07000	.00170
4.960	-2.000	-.01460	.01250	.00760	-.00420	.00160	.06420	.00180
4.960	.000	-.01080	.00680	.00520	-.00340	.00110	.05080	.00180
4.960	2.000	-.00100	-.00160	.00590	-.00390	.00130	.05420	.00160
4.960	4.000	.01420	-.01280	.00840	-.00480	.00250	.04760	.00140
4.960	6.000	.03470	-.02800	.00880	-.00450	.00260	.04190	.00100
4.960	8.000	.04530	-.03540	.00860	-.00460	.00270	.03480	.00080
4.960	10.000	.04780	-.03770	.00790	-.00480	.00280	.02850	.00090
	GRADIENT	.00262	-.00312	-.00101	.00033	-.00016	-.00276	-.00002

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1) (R72009) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1036/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.22790	.17830	.01030	-.01020	.00190	.03950	.00850
.601	-4.000	-.19900	.15540	.00750	-.00860	.00200	.03930	.00860
.601	-2.000	-.13620	.11110	.01010	-.00960	.00310	.04010	.00920
.601	.000	-.07360	.06630	.00900	-.00840	.00310	.04090	.00900
.601	2.000	-.00910	.02070	.00970	-.00870	.00350	.04210	.00750
.601	4.000	.05630	-.02630	.00860	-.00740	.00360	.04020	.00750
.601	6.000	.11150	-.06800	.00650	-.00550	.00320	.03960	.00480
.601	8.000	.16880	-.11180	.00720	-.00560	.00400	.03700	.00330
.601	10.000	.21640	-.14990	.00780	-.00600	.00460	.03530	.00200
	GRADIENT	.03162	-.02265	-.00003	.00022	.00020	.00019	-.00014

RUN NO. 1037/ 0 RN/L = 5.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.803	-5.000	-.21760	.17050	.00960	-.01070	.00270	.04830	.00840
.803	-4.000	-.19060	.15170	.01330	-.01260	.00290	.04690	.01020
.803	-2.000	-.12450	.10310	.01360	-.01270	.00350	.04710	.01050
.803	.000	-.06530	.06290	.01400	-.01220	.00410	.04290	.01520
.803	2.000	-.00410	.01940	.01370	-.01190	.00420	.04170	.01530
.803	4.000	.05980	-.02620	.01390	-.01140	.00490	.04230	.01280
.803	6.000	.11880	-.07020	.01250	-.01000	.00480	.04030	.01080
.803	8.000	.17940	-.11730	.01170	-.00930	.00510	.03760	.00920
.803	10.000	.23020	-.15790	.01190	-.00940	.00540	.03640	.00760
	GRADIENT	.03088	-.02187	.00032	.00001	.00024	-.00076	.00063

RUN NO. 1038/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.905	-5.000	-.21220	.17020	.01090	-.01070	.00200	.05230	.01310
.905	-4.000	-.17710	.14370	.00860	-.00940	.00180	.05180	.01280
.905	-2.000	-.11320	.09940	.01290	-.01190	.00300	.04700	.01960
.905	.000	-.05090	.06160	.01610	-.01380	.00450	.04750	.01950
.905	2.000	.00310	.01830	.01440	-.01200	.00410	.04760	.01900
.905	4.000	.06030	-.02280	.01490	-.01210	.00530	.04610	.01810
.905	6.000	.11950	-.06790	.01400	-.01080	.00520	.04200	.01690
.905	8.000	.17990	-.11570	.01330	-.01040	.00560	.04050	.01460
.905	10.000	.22650	-.15510	.01280	-.01010	.00540	.04100	.01170
	GRADIENT	.03005	-.02116	.00063	-.00026	.00039	-.00065	.00065

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72009) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1039/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.22290	.18500	.01420	-.01360	.00370	.06340	.01100
.999	-4.000	-.19360	.16350	.01710	-.01540	.00400	.06680	.00960
.999	-2.000	-.12390	.11390	.01650	-.01450	.00420	.06170	.01440
.999	.000	-.07280	.07920	.01450	-.01290	.00440	.06020	.01850
.999	2.000	-.00600	.03170	.01510	-.01290	.00480	.05870	.01840
.999	4.000	.05340	-.01270	.01410	-.01180	.00520	.05630	.01730
.999	6.000	.11680	-.06280	.01480	-.01230	.00590	.05340	.01470
.999	8.000	.18020	-.11460	.01570	-.01260	.00610	.05660	.01020
.999	10.000	.23680	-.16370	.01490	-.01150	.00560	.06440	.00400
	GRADIENT	.03069	-.02181	-.00016	.00030	.00015	-.00097	.00096

RUN NO. 1040/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.21690	.19740	.01270	-.01070	.00200	.07580	.01190
1.198	-4.000	-.19270	.18080	.00860	-.00830	.00070	.07570	.01480
1.198	-2.000	-.12330	.13050	.01190	-.01050	.00250	.07440	.01870
1.198	.000	-.04300	.06910	.00910	-.00780	.00290	.07380	.02070
1.198	2.000	.04100	.00340	.01050	-.00820	.00400	.07470	.02020
1.198	4.000	.12390	-.05970	.01040	-.00770	.00480	.07350	.02000
1.198	6.000	.18550	-.10740	.00810	-.00560	.00480	.06940	.02030
1.198	8.000	.22710	-.14130	.00710	-.00490	.00510	.06750	.01880
1.198	10.000	.25260	-.16420	.00720	-.00480	.00470	.06690	.01480
	GRADIENT	.03842	-.02907	-.00011	.00027	.00039	-.00023	.00087

RUN NO. 1173/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.19800	.18900	.00330	-.00440	-.00040	.05030	.03450
1.460	-4.000	-.17620	.17270	.00250	-.00270	-.00030	.05420	.03240
1.460	-2.000	-.10500	.11720	.00590	-.00500	.00100	.06190	.02780
1.460	.000	-.02880	.05840	.00600	-.00470	.00170	.06730	.02480
1.460	2.000	.04150	.00350	.00630	-.00490	.00230	.06770	.02570
1.460	4.000	.10300	-.04460	.00690	-.00510	.00260	.06690	.02580
1.460	6.000	.16260	-.09070	.00640	-.00420	.00260	.06610	.02520
1.460	8.000	.21190	-.12940	.00570	-.00340	.00240	.06570	.02320
1.460	10.000	.24160	-.15300	.00510	-.00300	.00220	.06610	.01940
	GRADIENT	.03447	-.02676	.00045	-.00016	.00036	.00194	-.00100

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72009) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1208/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.959	-5.000	-.09920	.11150	.00940	-.00790	.00180	.06940	.01650
1.959	-4.000	-.06770	.08890	.01100	-.00860	.00350	.06340	.01890
1.959	-2.000	-.03050	.06030	.01250	-.00980	.00340	.05850	.02350
1.959	.000	.02050	.01750	.01070	-.00830	.00290	.05980	.02170
1.959	2.000	.07090	-.02360	.01080	-.00800	.00360	.05960	.01960
1.959	4.000	.11590	-.05580	.01100	-.00800	.00360	.06220	.01800
1.959	6.000	.15630	-.08580	.01050	-.00750	.00330	.06370	.01620
1.959	8.000	.17910	-.10300	.01140	-.00800	.00340	.06410	.01520
1.959	10.000	.19080	-.11120	.01190	-.00830	.00370	.06300	.01510
	GRADIENT	.02370	-.01871	.00007	.00005	.00012	-.00064	.00008

RUN NO. 1270/ 0 RN/L = 5.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.04730	.05290	.01550	-.00890	.00370	.06690	.01180
2.990	-4.000	-.04370	.04740	.01190	-.00680	.00270	.06470	.01110
2.990	-2.000	-.01270	.02250	.01230	-.00800	.00260	.05970	.01080
2.990	.000	.01100	.00280	.01320	-.00880	.00260	.05540	.01050
2.990	2.000	.03570	-.01780	.00990	-.00650	.00190	.05270	.00990
2.990	4.000	.06620	-.04020	.00990	-.00660	.00220	.05050	.00930
2.990	6.000	.09280	-.06020	.00950	-.00630	.00250	.04870	.00850
2.990	8.000	.10250	-.06790	.00950	-.00630	.00300	.04560	.00830
2.990	10.000	.10700	-.07190	.00910	-.00590	.00300	.04200	.00840
	GRADIENT	.01283	-.01051	-.00049	.00017	-.00014	-.00187	-.00025

RUN NO. 1269/ 0 RN/L = 5.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04650	.03830	.01300	-.00400	.00260	.07070	.00240
4.960	-4.000	-.04100	.03410	.01110	-.00430	.00230	.06860	.00220
4.960	-2.000	-.03200	.02630	.00820	-.00450	.00190	.06350	.00200
4.960	.000	-.02330	.01830	.00680	-.00450	.00180	.05790	.00200
4.960	2.000	-.01410	.01020	.00710	-.00470	.00190	.05250	.00200
4.960	4.000	.00340	-.00430	.00770	-.00480	.00190	.04410	.00160
4.960	6.000	.02180	-.01840	.00730	-.00400	.00200	.03790	.00130
4.960	8.000	.03140	-.02530	.00750	-.00410	.00220	.03180	.00130
4.960	10.000	.03520	-.02850	.00740	-.00440	.00250	.02660	.00140
	GRADIENT	.00523	-.00452	-.00059	-.00008	-.00007	-.00289	-.00007

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1) (R72010) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1053/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.12000	.10630	.01210	-.01010	.00340	.03450	.01350
.602	-4.000	-.08950	.08480	.01480	-.01300	.00430	.03880	.01180
.602	-2.000	-.02850	.04180	.01150	-.01090	.00360	.04120	.01130
.602	.000	.02360	.00480	.01170	-.01040	.00470	.04260	.01070
.602	2.000	.09740	-.04660	.01070	-.00920	.00500	.04300	.00980
.602	4.000	.16490	-.09600	.01040	-.00890	.00450	.04210	.00890
.602	6.000	.22290	-.13990	.00990	-.00850	.00460	.04120	.00740
.602	8.000	.28390	-.18630	.01020	-.00910	.00540	.04320	.00400
.602	10.000	.33460	-.22530	.00960	-.00850	.00680	.04680	.00180
	GRADIENT	.03139	-.02223	-.00033	.00030	.00013	.00076	-.00045

RUN NO. 1052/ 0 RN/L = 5.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.802	-5.000	-.11450	.10640	.01230	-.01140	.00180	.03130	.02180
.802	-4.000	-.07640	.07930	.01400	-.01230	.00370	.03580	.01910
.802	-2.000	-.01850	.03900	.01500	-.01310	.00430	.03710	.01960
.802	.000	.04960	-.00970	.01180	-.01040	.00410	.03530	.02330
.802	2.000	.10940	-.05350	.01270	-.01070	.00450	.03750	.02070
.802	4.000	.17850	-.10270	.01180	-.00940	.00440	.03790	.01840
.802	6.000	.24810	-.15400	.01140	-.00900	.00590	.04130	.01560
.802	8.000	.30100	-.19560	.01110	-.00900	.00600	.04580	.01090
.802	10.000	.34230	-.23030	.00970	-.00830	.00610	.05030	.00840
	GRADIENT	.03213	-.02295	-.00017	.00028	.00022	.00052	-.00012

RUN NO. 1051/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.11080	.11040	.01690	-.01530	.00410	.03510	.03460
.902	-4.000	-.07570	.08460	.01730	-.01520	.00430	.03710	.03320
.902	-2.000	-.01240	.03870	.01650	-.01420	.00430	.03910	.03170
.902	.000	.05310	-.00660	.01640	-.01390	.00530	.03820	.03200
.902	2.000	.11580	-.05320	.01310	-.01110	.00520	.03940	.02990
.902	4.000	.18570	-.10560	.01260	-.01040	.00550	.04090	.02630
.902	6.000	.25620	-.15840	.01530	-.01190	.00700	.04340	.02270
.902	8.000	.31130	-.20270	.01250	-.01030	.00630	.04960	.01810
.902	10.000	.34990	-.23780	.01080	-.00950	.00610	.05700	.01420
	GRADIENT	.03264	-.02367	-.00054	.00058	.00016	.00052	-.00079

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72010) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1050/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.13890	.13900	.01490	-.01370	.00320	.04290	.03510
.999	-4.000	-.10320	.11190	.00890	-.00920	.00240	.04360	.03450
.999	-2.000	-.04140	.07030	.01300	-.01150	.00450	.04980	.03340
.999	.000	.03630	.01470	.01400	-.01210	.00520	.04880	.03310
.999	2.000	.10900	-.03920	.01250	-.01040	.00570	.05110	.03090
.999	4.000	.18100	-.09710	.01390	-.01180	.00660	.05070	.02630
.999	6.000	.25940	-.15880	.01100	-.00950	.00660	.05800	.02250
.999	8.000	.31790	-.20880	.01010	-.00880	.00750	.06060	.01780
.999	10.000	.35880	-.24720	.01090	-.00930	.00820	.06260	.01370
	GRADIENT	.03563	-.02603	.00015	.00005	.00043	.00091	-.00086

RUN NO. 1049/ 0 RN/L = 6.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.14610	.16600	.00920	-.00860	.00190	.06060	.04480
1.196	-4.000	-.12410	.14830	.01110	-.00980	.00250	.06060	.04450
1.196	-2.000	-.03450	.07680	.01190	-.01050	.00330	.06320	.04320
1.196	.000	.05410	.00760	.01200	-.01020	.00410	.06790	.04130
1.196	2.000	.13920	-.05950	.01120	-.00870	.00500	.07310	.03790
1.196	4.000	.22680	-.12480	.00960	-.00690	.00560	.07690	.03460
1.196	6.000	.29950	-.17900	.00720	-.00440	.00490	.07790	.03150
1.196	8.000	.33810	-.20910	.00720	-.00430	.00490	.08140	.02770
1.196	10.000	.41290	-.26980	.00570	-.00310	.00500	.08860	.01860
	GRADIENT	.04237	-.03315	.00001	.00021	.00041	.00193	-.00113

RUN NO. 1176/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.08620	.11530	.00740	-.00650	.00170	.07190	.02540
1.460	-4.000	-.04700	.08470	.00910	-.00770	.00230	.07150	.02630
1.460	-2.000	.02920	.02640	.00830	-.00700	.00270	.07020	.02920
1.460	.000	.10920	-.03700	.01010	-.00800	.00270	.06660	.03430
1.460	2.000	.18380	-.09570	.00990	-.00710	.00310	.06680	.03520
1.460	4.000	.25310	-.14740	.00930	-.00600	.00390	.07020	.03240
1.460	6.000	.31390	-.19430	.00710	-.00450	.00360	.07420	.02930
1.460	8.000	.36220	-.23250	.00490	-.00260	.00340	.08350	.02100
1.460	10.000	.37110	-.23880	.00380	-.00120	.00480	.08950	.01050
	GRADIENT	.03796	-.02949	.00020	.00006	.00020	-.00039	.00101

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72010) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1205/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-5.000	-.00440	.04630	.01170	-.00940	.00290	.06350	.02630
1.962	-4.000	.02240	.02330	.01100	-.00880	.00280	.06540	.02450
1.962	-2.000	.08860	-.02940	.01090	-.00830	.00330	.06730	.02190
1.962	.000	.14570	-.07590	.01040	-.00760	.00340	.06590	.02000
1.962	2.000	.19280	-.11230	.01000	-.00730	.00280	.06840	.01690
1.962	4.000	.24130	-.14560	.01090	-.00770	.00320	.07090	.01490
1.962	6.000	.29580	-.18390	.00980	-.00640	.00320	.07640	.01280
1.962	8.000	.31350	-.19380	.00920	-.00600	.00230	.07810	.01280
1.962	10.000	.30700	-.18870	.00970	-.00640	.00220	.07560	.01320
	GRADIENT	.02758	-.02166	-.00011	.00021	.00002	.00068	-.00125

RUN NO. 1275/ 0 RN/L = 5.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	.02330	-.00310	.00840	-.00670	.00110	.07130	.01030
2.990	-4.000	.03280	-.01120	.01020	-.00780	.00150	.06920	.00980
2.990	-2.000	.05440	-.02770	.01080	-.00770	.00240	.06470	.01000
2.990	.000	.06570	-.03930	.01120	-.00760	.00240	.06010	.01000
2.990	2.000	.09070	-.05840	.01070	-.00700	.00190	.05810	.00820
2.990	4.000	.12080	-.08930	.00760	-.00530	.00100	.05690	.00770
2.990	6.000	.16850	-.11990	.00830	-.00520	.00010	.05630	.00580
2.990	8.000	.19580	-.13860	.00690	-.00450	.00110	.05810	.00520
2.990	10.000	.18450	-.12950	.00830	-.00550	.00330	.05400	.00640
	GRADIENT	.01101	-.00903	-.00006	.00016	.00000	-.00168	-.00028

RUN NO. 1276/ 0 RN/L = 4.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	.04670	-.02790	.02050	-.01330	.00540	.07320	.00050
4.960	-4.000	.03090	-.01970	.01440	-.00960	.00380	.06970	.00060
4.960	-2.000	.01080	-.00990	.00630	-.00460	.00150	.06330	.00050
4.960	.000	.00590	-.00850	.00320	-.00250	.00080	.05790	.00020
4.960	2.000	.01670	-.01530	.00510	-.00340	.00190	.05300	-.00020
4.960	4.000	.02690	-.02540	.00600	-.00400	.00110	.05140	-.00060
4.960	6.000	.04460	-.03820	.00830	-.00450	.00250	.04870	-.00100
4.960	8.000	.05580	-.04300	.01040	-.00620	.00300	.03930	-.00160
4.960	10.000	.06570	-.04970	.00830	-.00540	.00210	.02910	-.00120
	GRADIENT	-.00202	.00028	-.00152	.00099	-.00041	-.00251	-.00013

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1) (R72011) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1124/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.19980	.16210	.01320	-.01240	.00290	.03310	.01230
.598	-4.000	-.17770	.14650	.01490	-.01330	.00360	.03490	.01140
.598	-2.000	-.10950	.09850	.01440	-.01260	.00430	.03730	.01080
.598	.000	-.04620	.05410	.01560	-.01310	.00450	.03940	.00900
.598	2.000	.02170	.00520	.01380	-.01150	.00440	.04100	.00710
.598	4.000	.08770	-.04200	.01460	-.01180	.00470	.03890	.00670
.598	6.000	.15400	-.08970	.01390	-.01100	.00460	.03610	.00580
.598	8.000	.21270	-.13400	.01440	-.01150	.00490	.03450	.00380
.598	10.000	.26920	-.17810	.01500	-.01200	.00530	.03560	.00160
	GRADIENT	.03238	-.02297	.00006	.00013	.00017	.00074	-.00066

RUN NO. 1125/ 0 RN/L = 5.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.800	-5.000	-.19470	.16040	.01480	-.01350	.00350	.03610	.01560
.800	-4.000	-.16470	.13860	.01570	-.01400	.00350	.03780	.01500
.800	-2.000	-.09730	.09070	.01590	-.01380	.00400	.03940	.01500
.800	.000	-.03190	.04500	.01590	-.01360	.00430	.03950	.01550
.800	2.000	.03310	-.00100	.01580	-.01300	.00460	.03910	.01510
.800	4.000	.10290	-.05140	.01490	-.01210	.00450	.03980	.01200
.800	6.000	.16690	-.09800	.01430	-.01130	.00470	.03680	.01100
.800	8.000	.23010	-.14490	.01400	-.01130	.00480	.03640	.00910
.800	10.000	.28390	-.18600	.01380	-.01130	.00480	.03630	.00730
	GRADIENT	.03306	-.02345	.00000	.00016	.00013	.00033	-.00027

RUN NO. 1126/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.19430	.16520	.01530	-.01380	.00370	.03520	.02700
.903	-4.000	-.15750	.13800	.01470	-.01330	.00350	.03660	.02580
.903	-2.000	-.08850	.08930	.01480	-.01290	.00400	.03610	.02770
.903	.000	-.02450	.04450	.01550	-.01290	.00410	.03680	.02700
.903	2.000	.04040	-.00170	.01450	-.01200	.00420	.03820	.02440
.903	4.000	.10590	-.04990	.01310	-.01080	.00380	.03680	.02210
.903	6.000	.18030	-.10590	.01210	-.00990	.00350	.03820	.01760
.903	8.000	.24560	-.15620	.01280	-.01040	.00390	.04300	.01230
.903	10.000	.29720	-.19870	.01220	-.00970	.00370	.04930	.00680
	GRADIENT	.03316	-.02365	-.00017	.00029	.00004	.00020	-.00046

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72011) (22 FEB 73)

REFERENCE DATA

BREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1128/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.004	-5.000	-.22180	.19580	.01790	-.01550	.00440	.05000	.02730
1.004	-4.000	-.18360	.16700	.01890	-.01610	.00470	.05160	.02550
1.004	-2.000	-.10860	.11190	.01970	-.01640	.00540	.05060	.02530
1.004	.000	-.04410	.06870	.01830	-.01480	.00520	.05550	.02420
1.004	2.000	.03100	.01410	.01830	-.01470	.00530	.05720	.02160
1.004	4.000	.11410	-.04850	.01980	-.01550	.00580	.05680	.01850
1.004	6.000	.19370	-.11250	.02040	-.01610	.00630	.05660	.01290
1.004	8.000	.26920	-.17260	.01830	-.01410	.00590	.07100	.00430
1.004	10.000	.32640	-.22120	.01600	-.01190	.00470	.08740	-.00370
	GRADIENT	.03674	-.02651	.00009	.00010	.00013	.00086	-.00088

RUN NO. 1127/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.19830	.19720	.01170	-.00990	.00240	.06270	.03310
1.199	-4.000	-.15990	.16760	.01080	-.00900	.00230	.06270	.03350
1.199	-2.000	-.07540	.10190	.01070	-.00880	.00280	.06480	.03210
1.199	.000	.01310	.03290	.01010	-.00780	.00350	.06730	.03020
1.199	2.000	.09950	-.03420	.01070	-.00780	.00440	.06980	.02750
1.199	4.000	.18530	-.10010	.00930	-.00650	.00450	.07120	.02460
1.199	6.000	.25550	-.15380	.00790	-.00520	.00450	.07230	.02040
1.199	8.000	.30880	-.19510	.00750	-.00470	.00430	.07420	.01530
1.199	10.000	.33430	-.21730	.00760	-.00460	.00340	.07800	.00880
	GRADIENT	.04289	-.03328	-.00019	.00033	.00027	.00103	-.00098

RUN NO. 1197/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.16180	.16730	.00910	-.00820	.00190	.06180	.03060
1.463	-4.000	-.12810	.14130	.00910	-.00790	.00200	.06290	.03030
1.463	-2.000	-.05280	.08260	.00970	-.00810	.00240	.06540	.02960
1.463	.000	.02480	.02270	.01000	-.00800	.00290	.06790	.02830
1.463	2.000	.09800	-.03420	.00990	-.00730	.00310	.06990	.02740
1.463	4.000	.16980	-.08870	.00930	-.00640	.00300	.07120	.02570
1.463	6.000	.23570	-.13880	.00820	-.00530	.00280	.07360	.02240
1.463	8.000	.29080	-.18730	.00620	-.00370	.00190	.07710	.01790
1.463	10.000	.32650	-.20740	.00520	-.00280	.00220	.08010	.01140
	GRADIENT	.03716	-.02873	.00005	.00017	.00014	.00108	-.00054

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72011) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1210/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-5.000	-.07140	.09250	.01180	-.00950	.00330	.06780	.02120
1.962	-4.000	-.04180	.06900	.01220	-.00960	.00390	.06640	.02110
1.962	-2.000	.01060	.02750	.01270	-.00990	.00400	.06570	.02070
1.962	.000	.06680	-.01720	.01200	-.00910	.00400	.06570	.01830
1.962	2.000	.11710	-.05670	.01140	-.00840	.00380	.06470	.01650
1.962	4.000	.17280	-.09640	.01090	-.00790	.00360	.06770	.01440
1.962	6.000	.22780	-.13670	.01090	-.00750	.00370	.06990	.01260
1.962	8.000	.26360	-.16160	.01120	-.00760	.00360	.07140	.01200
1.962	10.000	.27360	-.16800	.01180	-.00770	.00390	.07190	.01170
	GRADIENT	.02696	-.02099	-.00013	.00020	.00001	-.00007	-.00078

RUN NO. 1266/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.03050	.03560	.01050	-.00690	.00230	.07190	.00980
2.990	-4.000	-.02260	.02810	.00960	-.00650	.00210	.06970	.00950
2.990	-2.000	-.00220	.01090	.01000	-.00670	.00230	.06550	.00930
2.990	.000	.01700	-.00480	.01090	-.00740	.00260	.06150	.00900
2.990	2.000	.03910	-.02180	.01090	-.00710	.00270	.05880	.00800
2.990	4.000	.07210	-.04740	.00970	-.00670	.00240	.05620	.00740
2.990	6.000	.10460	-.07340	.00970	-.00660	.00220	.05450	.00610
2.990	8.000	.14180	-.10040	.00790	-.00500	.00140	.05510	.00500
2.990	10.000	.14970	-.10570	.00800	-.00480	.00210	.05260	.00530
	GRADIENT	.01109	-.00896	.00002	-.00002	.00004	-.00176	-.00026

RUN NO. 1265/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.03090	.02960	.01470	-.00610	.00380	.07690	.00200
4.960	-4.000	-.03030	.02680	.01230	-.00560	.00320	.07360	.00190
4.960	-2.000	-.02650	.02030	.00900	-.00500	.00240	.06730	.00170
4.960	.000	-.01910	.01260	.00750	-.00480	.00220	.06150	.00150
4.960	2.000	-.00880	.00430	.00790	-.00500	.00260	.05620	.00170
4.960	4.000	.00810	-.00750	.00870	-.00480	.00270	.05350	.00100
4.960	6.000	.03020	-.02480	.00970	-.00490	.00310	.04720	.00050
4.960	8.000	.04350	-.03410	.01010	-.00610	.00300	.03870	.00040
4.960	10.000	.04680	-.03660	.00920	-.00560	.00320	.03220	.00040
	GRADIENT	.00417	-.00403	-.00066	.00013	-.00011	-.00268	-.00009

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72012) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1097/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.599	-5.000	-.26320	.20580	.00520	-.00630	.00110	.04030	.01230
.599	-4.000	-.22280	.17740	.00810	-.00810	.00150	.04270	.01060
.599	-2.000	-.15630	.12960	.00870	-.00820	.00160	.04370	.01050
.599	.000	-.09390	.08620	.00670	-.00650	.00140	.04410	.01050
.599	2.000	-.03150	.04150	.00700	-.00640	.00160	.04470	.00870
.599	4.000	.03200	-.00400	.00830	-.00710	.00250	.04440	.00640
.599	6.000	.09580	-.05000	.00820	-.00650	.00310	.04050	.00690
.599	8.000	.16020	-.09900	.00740	-.00560	.00310	.03980	.00290
.599	10.000	.21910	-.14440	.00820	-.00590	.00360	.03950	.00050
	GRADIENT	.03241	-.02302	.00013	.00006	.00011	.00039	-.00054

RUN NO. 1096/ 0 RN/L = 5.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.803	-5.000	-.25440	.20180	.01810	-.01570	.00440	.03990	.01610
.803	-4.000	-.22030	.17700	.01680	-.01470	.00370	.04050	.01570
.803	-2.000	-.14730	.12390	.01510	-.01330	.00370	.04200	.01480
.803	.000	-.08560	.08100	.01670	-.01420	.00410	.03820	.01840
.803	2.000	-.02350	.03780	.01610	-.01350	.00400	.03810	.01790
.803	4.000	.04210	-.00900	.01600	-.01280	.00470	.03850	.01490
.803	6.000	.10520	-.05450	.01530	-.01200	.00450	.03550	.01360
.803	8.000	.17750	-.10900	.01540	-.01210	.00520	.03480	.01020
.803	10.000	.23920	-.15720	.01540	-.01210	.00550	.03670	.00630
	GRADIENT	.03280	-.02326	-.00015	.00026	.00005	-.00029	.00007

RUN NO. 1095/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.897	-5.000	-.24650	.19990	.01640	-.01500	.00340	.04150	.02470
.897	-4.000	-.21730	.17850	.01800	-.01600	.00370	.04200	.02450
.897	-2.000	-.14320	.12470	.01710	-.01490	.00350	.04010	.02630
.897	.000	-.08530	.08480	.01600	-.01340	.00400	.03980	.02670
.897	2.000	-.01710	.03690	.01660	-.01380	.00420	.03970	.02520
.897	4.000	.04540	-.00850	.01410	-.01190	.00370	.03740	.02370
.897	6.000	.11230	-.05710	.01520	-.00970	.00420	.03680	.01960
.897	8.000	.18340	-.11240	.01520	-.01100	.00450	.03760	.01500
.897	10.000	.23670	-.15710	.01330	-.01080	.00400	.04200	.00950
	GRADIENT	.03258	-.02317	-.00028	.00037	.00005	-.00043	-.00005

MSFC 545 (IA1) MOD ATP LV-(O1)/(T5)(S1) (R72012) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1094/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.993	-5.000	-.26850	.22550	.01710	-.01550	.00390	.05350	.02500
.993	-4.000	-.23120	.19060	.01720	-.01510	.00370	.05340	.02560
.993	-2.000	-.16110	.14690	.01740	-.01500	.00410	.05120	.02620
.993	.000	-.09380	.10000	.01780	-.01500	.00460	.05040	.02660
.993	2.000	-.02690	.05210	.01840	-.01520	.00470	.05030	.02510
.993	4.000	.04280	.00040	.01850	-.01490	.00480	.05020	.02360
.993	6.000	.11720	-.05660	.01770	-.01390	.00490	.05150	.01890
.993	8.000	.19300	-.11810	.01840	-.01440	.00530	.06000	.00940
.993	10.000	.25510	-.17180	.01750	-.01330	.00470	.07500	-.00110
	GRADIENT	.03438	-.02477	.00017	.00004	.00012	-.00040	-.00014

RUN NO. 1093/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.26500	.24510	.01150	-.01040	.00130	.06870	.02930
1.198	-4.000	-.23130	.21990	.01070	-.00990	.00130	.06770	.03070
1.198	-2.000	-.14560	.15410	.01280	-.01100	.00250	.06670	.03140
1.198	.000	-.05640	.08600	.01230	-.00970	.00310	.06760	.03080
1.198	2.000	.03060	.01570	.00970	-.00750	.00360	.06950	.02810
1.198	4.000	.11890	-.05320	.01000	-.00740	.00420	.06900	.02600
1.198	6.000	.19250	-.10970	.00870	-.00590	.00420	.06700	.02260
1.198	8.000	.24680	-.15200	.00800	-.00520	.00440	.06690	.01820
1.198	10.000	.28450	-.18360	.00770	-.00480	.00370	.06990	.01070
	GRADIENT	.04306	-.03351	-.00018	.00037	.00034	.00014	-.00041

RUN NO. 1188/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.465	-5.000	-.22090	.20980	.00840	-.00760	.00170	.05650	.03650
1.465	-4.000	-.19140	.18810	.00930	-.00790	.00220	.05940	.03510
1.465	-2.000	-.11900	.13250	.00860	-.00750	.00240	.06380	.03250
1.465	.000	-.04180	.07170	.00890	-.00720	.00230	.06650	.02950
1.465	2.000	.03120	.01470	.01010	-.00750	.00290	.06820	.02700
1.465	4.000	.10010	-.03830	.00830	-.00560	.00260	.06840	.02570
1.465	6.000	.16570	-.08870	.00710	-.00470	.00240	.06970	.02270
1.465	8.000	.22960	-.13810	.00470	-.00290	.00140	.07260	.01760
1.465	10.000	.25710	-.15880	.00330	-.00150	.00180	.07610	.00950
	GRADIENT	.03621	-.02808	.00003	.00018	.00010	.00134	-.00125

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72012) (22 FEB 73 .

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1207/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.961	-5.000	-.10910	.11780	.01110	-.00910	.00300	.07190	.01690
1.961	-4.000	-.08160	.09710	.01230	-.00970	.00400	.06760	.01860
1.961	-2.000	-.03620	.06190	.01310	-.01020	.00390	.06450	.02070
1.961	.000	.02070	.01700	.01250	-.00960	.00400	.06410	.01910
1.961	2.000	.06910	-.02170	.01170	-.00880	.00390	.06220	.01740
1.961	4.000	.12200	-.05990	.01130	-.00850	.00370	.06360	.01580
1.961	6.000	.17810	-.10080	.01140	-.00810	.00380	.06530	.01350
1.961	8.000	.21850	-.12880	.01190	-.00830	.00370	.06690	.01310
1.961	10.000	.22900	-.13580	.01230	-.00830	.00380	.06740	.01370
	GRADIENT	.02561	-.01985	-.00004	.00011	.00004	-.00085	-.00020

RUN NO. 1271/ 0 RN/L = 5.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.06080	.05950	.01360	-.00830	.00350	.07200	.01000
2.990	-4.000	-.05370	.05220	.01210	-.00750	.00300	.06950	.00950
2.990	-2.000	-.02890	.03120	.01060	-.00710	.00260	.06450	.00930
2.990	.000	-.00980	.01500	.01110	-.00750	.00260	.06040	.00870
2.990	2.000	.01420	-.00370	.01070	-.00720	.00250	.05710	.00810
2.990	4.000	.04850	-.02950	.01050	-.00710	.00270	.05390	.00760
2.990	6.000	.08140	-.05580	.00960	-.00650	.00250	.05180	.00640
2.990	8.000	.11310	-.07930	.00860	-.00550	.00170	.05180	.00560
2.990	10.000	.12550	-.08850	.00810	-.00490	.00160	.05010	.00610
	GRADIENT	.01189	-.00970	-.00028	.00009	-.00008	-.00202	-.00026

RUN NO. 1272/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.05890	.04820	.01330	-.00690	.00220	.07760	.00230
4.960	-4.000	-.05580	.04440	.01200	-.00670	.00230	.07440	.00220
4.960	-2.000	-.04860	.03620	.01000	-.00620	.00230	.06820	.00200
4.960	.000	-.03850	.02680	.00870	-.00570	.00240	.06250	.00180
4.960	2.000	-.02430	.01620	.00800	-.00520	.00250	.05770	.00170
4.960	4.000	-.00680	.00360	.00920	-.00520	.00260	.05260	.00140
4.960	6.000	.01250	-.01270	.00850	-.00450	.00310	.04440	.00090
4.960	8.000	.02950	-.02480	.00950	-.00600	.00300	.03560	.00060
4.960	10.000	.03900	-.03100	.00960	-.00570	.00310	.02930	.00080
	GRADIENT	.00567	-.00490	-.00050	.00021	.00004	-.00277	-.00010

MSFC 545 (IA1) MOD ATP LV-(01)/(T3) ($1) (R72013) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1080/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.12860	.11290	.01410	-.01180	.00400	.03400	.01170
.602	-4.000	-.10070	.09320	.01560	-.01360	.00440	.03630	.01080
.602	-2.000	-.03930	.05030	.01440	-.01260	.00440	.03910	.01010
.602	.000	.02230	.00730	.01480	-.01240	.00520	.04090	.00940
.602	2.000	.09270	-.04200	.01470	-.01180	.00530	.04120	.00850
.602	4.000	.16180	-.09190	.01400	-.01110	.00510	.04050	.00750
.602	6.000	.22790	-.14080	.01250	-.00990	.00530	.03970	.00600
.602	8.000	.29190	-.18810	.01310	-.01040	.00600	.04160	.00310
.602	10.000	.34700	-.23000	.01250	-.00990	.00660	.04430	.00160
	GRADIENT	.03228	-.02271	-.00005	.00016	.00014	.00073	-.00044

RUN NO. 1081/ 0 RN/L = 5.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.800	-5.000	-.12220	.11150	.01480	-.01310	.00300	.03250	.01860
.800	-4.000	-.08800	.08710	.01660	-.01420	.00420	.03570	.01690
.800	-2.000	-.02580	.04400	.01770	-.01480	.00480	.03820	.01660
.800	.000	.04190	-.00370	.01490	-.01250	.00450	.03660	.01960
.800	2.000	.10580	-.04940	.01540	-.01240	.00500	.03780	.01700
.800	4.000	.17740	-.10070	.01420	-.01110	.00490	.03830	.01550
.800	6.000	.25160	-.15500	.01380	-.01070	.00600	.04100	.01210
.800	8.000	.31520	-.20240	.01400	-.01080	.00620	.04540	.00870
.800	10.000	.36700	-.24260	.01240	-.00970	.00610	.05030	.00640
	GRADIENT	.03304	-.02337	-.00017	.00029	.00017	.00049	-.00014

RUN NO. 1082/ 0 RN/L = 6.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.12110	.11620	.01770	-.01550	.00440	.03400	.03030
.900	-4.000	-.08640	.09120	.01730	-.01490	.00440	.03660	.02860
.900	-2.000	-.02100	.04500	.01730	-.01450	.00460	.03790	.02860
.900	.000	.04440	-.00040	.01700	-.01400	.00510	.03740	.02900
.900	2.000	.11280	-.05000	.01460	-.01200	.00510	.03850	.02700
.900	4.000	.18590	-.10380	.01410	-.01130	.00520	.03980	.02380
.900	6.000	.25870	-.15770	.01490	-.01170	.00620	.04280	.02070
.900	8.000	.32050	-.20440	.01380	-.01080	.00610	.04840	.01730
.900	10.000	.36880	-.24360	.01300	-.01010	.00630	.05470	.01430
	GRADIENT	.03303	-.02415	-.00041	.00047	.00010	.00051	-.00057

MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1) (R72013) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1083/ 0 RN/L = 6.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.14680	.14350	.01670	-.01480	.00390	.04450	.03040
.996	-4.000	-.11000	.11680	.01440	-.01290	.00370	.04610	.02920
.996	-2.000	-.04500	.07210	.01630	-.01370	.00500	.05070	.02880
.996	.000	.03130	.01850	.01620	-.01340	.00540	.05140	.02840
.996	2.000	.10940	-.03870	.01540	-.01240	.00560	.05310	.02630
.996	4.000	.19370	-.10350	.01570	-.01280	.00620	.05430	.02300
.996	6.000	.27500	-.16690	.01450	-.01170	.00650	.06050	.01870
.996	8.000	.34130	-.22070	.01260	-.00990	.00700	.06590	.01420
.996	10.000	.38880	-.26180	.01130	-.00860	.00760	.06790	.01120
	GRADIENT	.03760	-.02706	-.00002	.00017	.00027	.00107	-.00071

RUN NO. 1084/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.12420	.14700	.01070	-.00920	.00260	.06080	.04010
1.196	-4.000	-.08190	.11390	.01150	-.00960	.00310	.06240	.03920
1.196	-2.000	.00840	.04290	.01140	-.00950	.00360	.06650	.03700
1.196	.000	.10010	-.02780	.01150	-.00900	.00440	.07140	.03460
1.196	2.000	.18690	-.09450	.01110	-.00810	.00510	.07610	.03140
1.196	4.000	.27080	-.15690	.00930	-.00630	.00520	.07950	.02850
1.196	6.000	.33860	-.20720	.00750	-.00470	.00490	.08150	.02550
1.196	8.000	.39000	-.24680	.00690	-.00410	.00490	.08570	.02060
1.196	10.000	.39250	-.24990	.00700	-.00420	.00520	.08830	.01780
	GRADIENT	.04420	-.03407	-.00014	.00031	.00030	.00215	-.00130

RUN NO. 1185/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.08730	.11420	.00920	-.00790	.00230	.06860	.02670
1.463	-4.000	-.04860	.08440	.01000	-.00830	.00260	.06900	.02710
1.463	-2.000	.02890	.02510	.00980	-.00790	.00300	.06970	.02810
1.463	.000	.10780	-.03610	.01050	-.00810	.00320	.06980	.02970
1.463	2.000	.18340	-.09440	.01010	-.00710	.00340	.07140	.02940
1.463	4.000	.25590	-.14820	.00920	-.00600	.00370	.07430	.02720
1.463	6.000	.32190	-.19790	.00740	-.00460	.00330	.07740	.02450
1.463	8.000	.37600	-.23860	.00580	-.00330	.00310	.08370	.01920
1.463	10.000	.39520	-.25170	.00500	-.00240	.00370	.08740	.01420
	GRADIENT	.03831	-.02936	.00001	.00021	.00015	.00056	.00016

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72013) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1206/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.958	-5.000	-.01220	.04970	.01230	-.00980	.00360	.06680	.02350
1.958	-4.000	.01590	.02610	.01190	-.00940	.00350	.06800	.02190
1.958	-2.000	.07870	-.02350	.01200	-.00920	.00390	.06960	.01940
1.958	.000	.13800	-.07070	.01130	-.00830	.00380	.06910	.01720
1.958	2.000	.18710	-.10840	.01070	-.00780	.00330	.07080	.01470
1.958	4.000	.24390	-.14810	.01110	-.00780	.00340	.07420	.01280
1.958	6.000	.30180	-.18990	.01040	-.00690	.00330	.07830	.01090
1.958	8.000	.33230	-.21030	.01000	-.00660	.00280	.08080	.00980
1.958	10.000	.33500	-.21290	.01000	-.00670	.00290	.08010	.00920
	GRADIENT	.02848	-.02210	-.00016	.00024	-.00003	.00069	-.00118

RUN NO. 1274/ 0 RN/L = 5.52 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	.01180	.00400	.00900	-.00670	.00170	.07340	.00910
2.990	-4.000	.02140	-.00390	.01000	-.00730	.00210	.07180	.00870
2.990	-2.000	.04120	-.01960	.01060	-.00730	.00270	.06800	.00840
2.990	.000	.05560	-.03250	.01070	-.00720	.00260	.06390	.00820
2.990	2.000	.07950	-.05020	.01060	-.00710	.00240	.06150	.00710
2.990	4.000	.11630	-.07870	.00930	-.00640	.00220	.06010	.00640
2.990	6.000	.15170	-.10620	.00900	-.00610	.00180	.05880	.00520
2.990	8.000	.17330	-.12190	.00860	-.00570	.00290	.05790	.00450
2.990	10.000	.17010	-.11950	.01000	-.00660	.00490	.05320	.00480
	GRADIENT	.01099	-.00873	.00004	.00004	.00004	-.00155	-.00029

RUN NO. 1273/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	.01150	-.00060	.01510	-.00920	.00360	.07780	.00060
4.960	-4.000	.00700	.00020	.01160	-.00720	.00280	.07400	.00080
4.960	-2.000	.00400	-.00100	.00710	-.00460	.00170	.06710	.00100
4.960	.000	.00820	-.00570	.00550	-.00360	.00150	.06120	.00090
4.960	2.000	.01810	-.01280	.00640	-.00400	.00220	.05650	.00050
4.960	4.000	.02940	-.02280	.00740	-.00450	.00200	.05310	.00010
4.960	6.000	.04690	-.03690	.00840	-.00480	.00280	.05040	-.00030
4.960	8.000	.05900	-.04470	.00940	-.00570	.00320	.04390	-.00070
4.960	10.000	.06340	-.04780	.00800	-.00520	.00280	.03600	-.00050
	GRADIENT	.00206	-.00244	-.00081	.00050	-.00014	-.00270	-.00006

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72014) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2312/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.660	-.01730	.03230	.10610	-.07380	.03700	.02140	.02850
.598	-3.650	-.02030	.03640	.06780	-.04760	.02510	.02450	.02770
.598	-1.550	-.02680	.04300	.02900	-.02110	.01220	.02770	.02670
.598	.490	-.02740	.04570	-.00780	.00440	.00020	.02780	.02690
.598	2.560	-.03000	.04720	-.04440	.02960	-.01190	.02600	.02800
.598	4.590	-.03220	.04710	-.08160	.05530	-.02460	.02460	.02740
.598	6.650	-.03270	.04500	-.11720	.07930	-.03640	.02020	.02980
.598	.490	-.02910	.04720	-.00860	.00490	-.00010	.02760	.02710
	GRADIENT	-.00131	.00125	-.01808	.01246	-.00600	-.00007	.00003

RUN NO. 2313/ 0 RN/L = 5.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.802	-5.760	-.00110	.02420	.11830	-.08240	.04120	.02350	.03340
.802	-3.710	-.00350	.02780	.07970	-.05630	.02900	.02560	.03210
.802	-1.590	-.00110	.02790	.03870	-.02740	.01520	.02790	.03160
.802	.480	-.00350	.03010	-.00180	.00050	.00100	.02800	.03180
.802	2.570	-.00600	.03160	-.03550	.02450	-.01080	.02640	.03270
.802	4.640	-.00750	.03040	-.08120	.05640	-.02600	.02420	.03290
.802	6.730	-.00500	.02780	-.12010	.08240	-.03850	.02280	.03300
.802	.480	-.00280	.03000	-.00100	.00020	.00150	.02840	.03170
	GRADIENT	-.00062	.00043	-.01898	.01329	-.00652	-.00020	.00013

RUN NO. 2314/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.790	.00030	.02820	.12140	-.08510	.04350	.02900	.04050
.900	-3.740	.00020	.02970	.08210	-.05810	.03040	.03040	.03850
.900	-1.600	.00060	.03150	.03910	-.02770	.01560	.03300	.03710
.900	.480	-.00490	.03610	-.00250	.00140	.00090	.03290	.03660
.900	2.570	.00230	.03020	-.04180	.02940	-.01290	.03200	.03670
.900	4.660	.00180	.02890	-.08350	.05900	-.02760	.03010	.03770
.900	6.760	.00280	.02650	-.12450	.08710	-.04100	.02810	.03780
.900	.480	-.00260	.03360	-.00180	.00110	.00120	.03290	.03590
	GRADIENT	.00023	-.00014	-.01965	.01389	-.00689	-.00007	-.00010

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72014) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2316/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.994	-5.820	-.00410	.04060	.12170	-.08590	.04780	.04540	.04140
.994	-3.750	-.00970	.04840	.07770	-.05460	.03200	.04910	.04020
.994	-1.600	-.01300	.05250	.03420	-.02370	.01570	.05050	.03910
.994	.490	-.01040	.05020	-.00510	.00360	.00010	.04900	.03840
.994	2.610	-.00490	.04430	-.04740	.03380	-.01610	.04760	.03590
.994	4.720	-.01010	.04880	-.09050	.06420	-.03300	.05050	.03830
.994	6.790	-.00140	.03710	-.13480	.09490	-.04790	.04410	.03770
.994	.490	-.01040	.04970	-.00580	.00360	.00060	.04940	.03780
	GRADIENT	.00034	-.00035	-.01976	.01395	-.00765	-.00000	-.00033

RUN NO. 2315/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.900	.03090	.01960	.11350	-.07350	.04770	.05930	.04110
1.196	-3.800	.03060	.02300	.07140	-.04580	.03120	.06200	.04020
1.196	-1.630	.03500	.02180	.03290	-.02090	.01530	.06340	.04010
1.196	.490	.03690	.02050	-.00300	.00150	-.00020	.06410	.03900
1.196	2.610	.04350	.01370	-.03810	.02360	-.01560	.06370	.03890
1.196	4.750	.06140	-.00330	-.08040	.05130	-.03280	.06080	.03990
1.196	6.890	.05880	-.00370	-.11950	.07630	-.04890	.05820	.04100
1.196	.500	.04180	.01540	-.00580	.00320	-.00060	.06400	.03930
	GRADIENT	.00328	-.00284	-.01755	.01119	-.00745	-.00010	-.00008

RUN NO. 2310/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.464	-5.910	.04920	.00350	.11810	-.07790	.04620	.06550	.03210
1.464	-3.810	.05520	.00140	.07650	-.05090	.03130	.06650	.03160
1.464	-1.630	.05920	.00080	.03280	-.02170	.01450	.06600	.03240
1.464	.500	.06130	-.00020	-.00750	.00480	-.00100	.06710	.03130
1.464	2.650	.06250	-.00200	-.04760	.03160	-.01660	.06630	.03200
1.464	4.780	.05950	-.00160	-.09350	.06280	-.03340	.06240	.03470
1.464	6.930	.06080	-.00580	-.13560	.08960	-.04800	.06060	.03530
1.464	.510	.05800	.00170	-.00950	.00590	-.00130	.06730	.03130
	GRADIENT	.00056	-.00041	-.01959	.01308	-.00748	-.00037	.00027

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72014) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2300/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-5.970	.07310	-.02250	.12160	-.07830	.04020	.06460	.02290
1.962	-3.810	.08580	-.03110	.07780	-.05070	.02600	.06250	.02260
1.962	-1.620	.09380	-.03640	.03360	-.02170	.01150	.06160	.02260
1.962	.520	.09770	-.03890	-.00720	.00500	-.00160	.06110	.02300
1.962	2.670	.09070	-.03240	-.04910	.03250	-.01580	.06450	.02300
1.962	4.830	.08610	-.03020	-.09140	.05960	-.02970	.06500	.02340
1.962	6.980	.07860	-.02710	-.13480	.08630	-.04320	.06240	.02510
1.962	.490	.09950	-.04090	-.00920	.00620	-.00240	.05950	.02330
	GRADIENT	-.00011	.00027	-.01952	.01274	-.00643	.00037	.00009

RUN NO. 2295/ 0 RN/L = 5.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.750	.04280	-.02040	.09380	-.06150	.02670	.05600	.01350
2.990	-3.690	.04670	-.02320	.06290	-.04090	.01760	.05570	.01350
2.990	-1.570	.04900	-.02410	.03060	-.02000	.00840	.05580	.01340
2.990	.490	.04780	-.02410	-.00330	.00190	-.00080	.05550	.01330
2.990	2.610	.04950	-.02530	-.03730	.02420	-.01000	.05600	.01310
2.990	4.670	.04880	-.02460	-.06850	.04470	-.01910	.05550	.01320
2.990	6.730	.04350	-.02030	-.10040	.06560	-.02980	.05510	.01380
2.990	.490	.05090	-.02550	-.00390	.00230	-.00080	.05560	.01330
	GRADIENT	.00023	-.00019	-.01582	.01031	-.00439	-.00001	-.00004

RUN NO. 2294/ 0 RN/L = 4.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.570	.00100	-.00030	.05980	-.03750	.01690	.05560	.00290
4.960	-3.580	-.00050	.00110	.03790	-.02260	.01070	.05670	.00310
4.960	-1.520	.00240	.00050	.01920	-.01100	.00550	.05600	.00330
4.960	.470	.00160	.00100	.00110	-.00010	.00020	.05650	.00330
4.960	2.520	.00560	-.00170	-.01870	.01140	-.00490	.05510	.00340
4.960	4.540	.00470	-.00260	-.03840	.02380	-.01070	.05460	.00350
4.960	6.540	.00820	-.00360	-.06030	.03910	-.01740	.05410	.00350
4.960	.470	.00410	.00010	.00110	.00000	.00020	.05620	.00350
	GRADIENT	.00067	-.00047	-.00939	.00568	-.00262	-.00025	.00004

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72015) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1018/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.22220	.17960	.01030	-.01070	.00260	.03250	.01100
.602	-4.000	-.19040	.15620	.01100	-.01060	.00330	.03470	.01120
.602	-2.000	-.12490	.10960	.01080	-.01050	.00350	.03850	.00920
.602	.000	-.06260	.06630	.00850	-.00770	.00290	.03910	.00960
.602	2.000	.01250	.01290	.01030	-.00920	.00380	.03690	.01000
.602	4.000	.08110	-.03650	.01020	-.00850	.00440	.03660	.00740
.602	6.000	.14270	-.08280	.00950	-.00780	.00490	.03460	.00490
.602	8.000	.20910	-.13140	.01060	-.00830	.00560	.03050	.00480
.602	10.000	.26360	-.17180	.01140	-.00900	.00620	.02890	.00360
	GRADIENT	.03369	-.02393	-.00008	.00028	.00015	.00039	-.00033

RUN NO. 1019/ 0 RN/L = 5.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.802	-5.000	-.21570	.17860	.00830	-.00740	.00160	.03690	.01620
.802	-4.000	-.18450	.15580	.00800	-.00700	.00170	.03890	.01500
.802	-2.000	-.11100	.10390	.00400	-.00360	.00110	.04080	.01470
.802	.000	-.04830	.05970	.00660	-.00530	.00180	.04010	.01530
.802	2.000	.01410	.01590	.00750	-.00580	.00230	.03880	.01560
.802	4.000	.07520	-.02850	.00770	-.00570	.00330	.03810	.01320
.802	6.000	.14660	-.08040	.00720	-.00490	.00420	.03500	.01160
.802	8.000	.20570	-.12450	.00600	-.00410	.00440	.03310	.01010
.802	10.000	.25770	-.16250	.00470	-.00310	.00440	.03120	.00960
	GRADIENT	.03248	-.02304	-.00001	.00014	.00017	.00005	-.00019

RUN NO. 1020/ 0 RN/L = 6.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.21610	.18370	.00540	-.00480	.00060	.04050	.02390
.901	-4.000	-.18320	.16000	.00740	-.00620	.00110	.04010	.02520
.901	-2.000	-.11110	.10790	.00650	-.00540	.00100	.04420	.02190
.901	.000	-.04030	.05770	.00630	-.00460	.00170	.04400	.02240
.901	2.000	.01990	.01540	.00690	-.00480	.00250	.03920	.02510
.901	4.000	.08060	-.02850	.00580	-.00370	.00320	.03620	.02410
.901	6.000	.14360	-.07610	.00520	-.00310	.00400	.03290	.02240
.901	8.000	.20430	-.11960	.00640	-.00390	.00460	.03010	.02170
.901	10.000	.25210	-.15550	.00750	-.00440	.00450	.02830	.02140
	GRADIENT	.03325	-.02374	-.00001	.00017	.00028	-.00040	.00002

MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)/(S1) (R72015) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1021/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.22380	.19800	.00360	-.00370	-.00050	.05710	.02100
.997	-4.000	-.18780	.17190	.00540	-.00470	.00000	.05640	.02250
.997	-2.000	-.11900	.12100	.00600	-.00470	.00070	.05450	.02220
.997	.000	-.03900	.06290	.00610	-.00440	.00180	.05610	.02100
.997	2.000	.02950	.01330	.00440	-.00290	.00200	.05090	.02410
.997	4.000	.08920	-.03250	.00470	-.00280	.00280	.04540	.02360
.997	6.000	.16210	-.08950	.00480	-.00280	.00370	.03990	.02060
.997	8.000	.23590	-.14680	.00450	-.00230	.00380	.03900	.02230
.997	10.000	.28260	-.18290	.00500	-.00270	.00400	.03650	.02280
	GRADIENT	.03531	-.02593	.00002	.00017	.00036	-.00115	.00025

RUN NO. 1022/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.17940	.18130	.00560	-.00550	.00080	.07780	.03180
1.198	-4.000	-.14060	.15010	.00710	-.00650	.00140	.07770	.03160
1.198	-2.000	-.05380	.08270	.01010	-.00840	.00260	.08030	.02970
1.198	.000	.03460	.01480	.00940	-.00730	.00360	.07790	.03160
1.198	2.000	.11370	-.04650	.00830	-.00640	.00460	.07490	.03440
1.198	4.000	.19750	-.10960	.00710	-.00520	.00460	.07510	.03450
1.198	6.000	.26660	-.16190	.00650	-.00420	.00510	.07300	.03450
1.198	8.000	.31800	-.20050	.00590	-.00380	.00520	.07210	.03200
1.198	10.000	.34760	-.22390	.00560	-.00340	.00560	.07110	.02960
	GRADIENT	.04210	-.03249	.00013	.00006	.00045	-.00039	.00038

RUN NO. 1167/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.14910	.14890	.00630	-.00590	.00040	.06650	.02570
1.461	-4.000	-.11400	.12210	.00730	-.00620	.00070	.06860	.02420
1.461	-2.000	-.03540	.06100	.00780	-.00630	.00110	.06850	.02370
1.461	.000	.03910	.00320	.00760	-.00580	.00170	.06790	.02470
1.461	2.000	.11280	-.05370	.00650	-.00520	.00170	.06970	.02320
1.461	4.000	.18080	-.10380	.00600	-.00430	.00200	.06920	.02550
1.461	6.000	.24760	-.15420	.00540	-.00360	.00220	.06870	.02640
1.461	8.000	.28220	-.18110	.00670	-.00430	.00270	.06990	.02500
1.461	10.000	.31090	-.20030	.00690	-.00400	.00310	.07000	.02400
	GRADIENT	.03698	-.02843	-.00008	.00018	.00018	.00024	-.00005

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72015) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1224/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.958	-5.000	-.09170	.10450	.01130	-.00860	.00320	.06710	.02000
1.958	-4.000	-.06320	.08180	.01180	-.00860	.00320	.06410	.02060
1.958	-2.000	-.00690	.03870	.01210	-.00880	.00340	.06120	.02130
1.958	.000	.04820	-.00460	.01130	-.00830	.00330	.05910	.02130
1.958	2.000	.10100	-.04440	.01070	-.00740	.00330	.05790	.02050
1.958	4.000	.15440	-.08230	.01170	-.00820	.00360	.06170	.01900
1.958	6.000	.20310	-.11940	.01060	-.00720	.00380	.06370	.01790
1.958	8.000	.24510	-.15150	.01160	-.00830	.00320	.06410	.01740
1.958	10.000	.25050	-.15580	.01240	-.00890	.00350	.06080	.01810
	GRADIENT	.02733	-.02083	-.00004	.00010	.00003	-.00070	-.00009

RUN NO. 1247/ 0 RN/L = 5.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.03690	.04070	.00850	-.00600	.00130	.07150	.00990
2.990	-4.000	-.02490	.03190	.01000	-.00660	.00200	.06860	.01010
2.990	-2.000	-.00070	.01140	.01050	-.00680	.00210	.06270	.01020
2.990	.000	.02380	-.00780	.01090	-.00710	.00250	.05740	.01030
2.990	2.000	.05730	-.03250	.01010	-.00660	.00220	.05400	.01030
2.990	4.000	.09580	-.06230	.00950	-.00610	.00210	.05320	.00860
2.990	6.000	.12620	-.08660	.00960	-.00610	.00230	.05180	.00720
2.990	8.000	.13130	-.09020	.00990	-.00630	.00250	.04930	.00670
2.990	10.000	.12380	-.08470	.00990	-.00640	.00350	.04340	.00720
	GRADIENT	.01444	-.01124	.00007	-.00000	.00007	-.00214	-.00010

RUN NO. 1248/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04270	.03950	.01230	-.00750	.00270	.06890	.00160
4.960	-4.000	-.04040	.03650	.01030	-.00600	.00230	.06750	.00150
4.960	-2.000	-.03330	.02900	.00780	-.00400	.00190	.06380	.00120
4.960	.000	-.02410	.02030	.00670	-.00330	.00180	.05970	.00110
4.960	2.000	-.01500	.01170	.00690	-.00370	.00180	.05590	.00090
4.960	4.000	.00770	-.00660	.00700	-.00400	.00200	.04860	.00070
4.960	6.000	.03120	-.02500	.00550	-.00270	.00160	.04270	.00000
4.960	8.000	.04740	-.03600	.00640	-.00340	.00240	.03620	-.00040
4.960	10.000	.04860	-.03720	.00540	-.00300	.00230	.02990	-.00050
	GRADIENT	.00525	-.00486	-.00056	.00037	-.00007	-.00217	-.00010

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)/(S1) (R72016) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1027/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.29130	.22800	.01410	-.01300	.00450	.03350	.01150
.600	-4.000	-.25720	.20330	.01320	-.01220	.00390	.03470	.01150
.600	-2.000	-.18920	.15360	.01210	-.01130	.00420	.03640	.00990
.600	.000	-.12500	.10880	.01260	-.01110	.00440	.03610	.01050
.600	2.000	-.05670	.05990	.01150	-.01020	.00390	.03560	.00930
.600	4.000	.01520	.00820	.01180	-.00970	.00470	.03500	.00750
.600	6.000	.07740	-.03810	.01180	-.00930	.00520	.03220	.00620
.600	8.000	.13560	-.08210	.01070	-.00840	.00550	.02940	.00430
.600	10.000	.19280	-.12430	.01130	-.00850	.00620	.02620	.00320
	GRADIENT	.03382	-.02421	-.00024	.00034	.00002	.00013	-.00040

RUN NO. 1026/ 0 RN/L = 5.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.803	-5.000	-.28810	.22920	.01010	-.00920	.00260	.03990	.01600
.803	-4.000	-.25290	.20400	.00850	-.00780	.00220	.03920	.01660
.803	-2.000	-.18220	.15300	.00790	-.00710	.00250	.04170	.01460
.803	.000	-.11770	.10770	.00880	-.00740	.00250	.03850	.01740
.803	2.000	-.05020	.05940	.00790	-.00650	.00310	.03780	.01710
.803	4.000	.01570	.01210	.00900	-.00680	.00400	.03700	.01510
.803	6.000	.07290	-.02990	.00880	-.00640	.00450	.03320	.01400
.803	8.000	.13380	-.07550	.00830	-.00570	.00520	.02880	.01290
.803	10.000	.19230	-.11810	.00780	-.00530	.00560	.02370	.01320
	GRADIENT	.03369	-.02405	-.00008	.00023	.00016	-.00035	-.00001

RUN NO. 1025/ 0 RN/L = 6.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.28890	.23710	.00680	-.00630	.00090	.04270	.02640
.901	-4.000	-.25720	.21340	.00920	-.00800	.00170	.04290	.02600
.901	-2.000	-.18290	.15940	.00890	-.00740	.00180	.04440	.02390
.901	.000	-.10730	.10490	.00770	-.00620	.00160	.04310	.02450
.901	2.000	-.04330	.05960	.00840	-.00650	.00260	.03990	.02550
.901	4.000	.01290	.01800	.00690	-.00520	.00320	.03710	.02450
.901	6.000	.06970	-.02470	.00810	-.00570	.00410	.03210	.02310
.901	8.000	.13270	-.07090	.00930	-.00640	.00490	.02610	.02260
.901	10.000	.18480	-.10990	.00940	-.00620	.00530	.02210	.02270
	GRADIENT	.03422	-.02476	-.00007	.00019	.00021	-.00061	-.00015

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)/(S1) (R72016) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1023/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.29290	.24710	.00810	-.00710	.00050	.05690	.02150
.996	-4.000	-.25730	.22030	.00710	-.00650	.00040	.05660	.02180
.996	-2.000	-.18350	.16660	.00800	-.00670	.00120	.05540	.02250
.996	.000	-.11020	.11260	.00820	-.00660	.00200	.05510	.02210
.996	2.000	-.04080	.06160	.00830	-.00600	.00240	.05100	.02330
.996	4.000	.02320	.01330	.00760	-.00530	.00310	.04480	.02350
.996	6.000	.08750	-.03770	.00740	-.00510	.00420	.03850	.02210
.996	8.000	.16140	-.09530	.00790	-.00510	.00450	.03470	.02220
.996	10.000	.21880	-.13960	.00780	-.00490	.00460	.03030	.02200
	GRADIENT	.03541	-.02612	.00002	.00016	.00031	-.00122	.00022

RUN NO. 1024/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.25750	.24010	.00690	-.00660	.00080	.07930	.03110
1.198	-4.000	-.21670	.20850	.00720	-.00670	.00150	.07980	.03060
1.198	-2.000	-.12180	.13310	.00810	-.00700	.00200	.07840	.03000
1.198	.000	-.03320	.06440	.00660	-.00530	.00290	.07730	.02980
1.198	2.000	.04490	.00490	.00600	-.00480	.00370	.07400	.03170
1.198	4.000	.12050	-.05280	.00590	-.00430	.00440	.07070	.03280
1.198	6.000	.19070	-.10750	.00570	-.00380	.00490	.06870	.03180
1.198	8.000	.24130	-.14840	.00610	-.00400	.00550	.06680	.03170
1.198	10.000	.27610	-.17640	.00580	-.00370	.00590	.06350	.03060
	GRADIENT	.04246	-.03294	-.00016	.00030	.00039	-.00097	.00019

RUN NO. 1170/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.20610	.19260	.00810	-.00710	.00150	.07290	.02270
1.463	-4.000	-.16900	.16320	.00820	-.00670	.00130	.07400	.02120
1.463	-2.000	-.09030	.10130	.00870	-.00720	.00200	.07290	.02020
1.463	.000	-.00670	.03600	.00800	-.00610	.00210	.07230	.02050
1.463	2.000	.05830	-.01510	.00760	-.00600	.00240	.07290	.01920
1.463	4.000	.12920	-.06750	.00660	-.00480	.00250	.06940	.02290
1.463	6.000	.19000	-.11390	.00660	-.00430	.00280	.06840	.02360
1.463	8.000	.22460	-.14180	.00660	-.00420	.00310	.06670	.02310
1.463	10.000	.25730	-.16520	.00600	-.00360	.00320	.06660	.02270
	GRADIENT	.03753	-.02920	-.00016	.00023	.00013	-.00034	-.00005

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72016) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1225/ 0 RN/L = 6.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.957	-5.000	-.14220	.14020	.00980	-.00730	.00250	.07040	.01750
1.957	-4.000	-.11150	.11710	.01090	-.00800	.00330	.06740	.01780
1.957	-2.000	-.06490	.08050	.01020	-.00770	.00290	.06190	.01940
1.957	.000	-.00430	.03320	.01200	-.00890	.00370	.05940	.01960
1.957	2.000	.05260	-.01070	.01030	-.00750	.00340	.05750	.01820
1.957	4.000	.10680	-.05010	.01190	-.00840	.00390	.05940	.01740
1.957	6.000	.15460	-.08640	.01080	-.00750	.00380	.06090	.01730
1.957	8.000	.19430	-.11680	.01180	-.00870	.00340	.05950	.01740
1.957	10.000	.20200	-.12310	.01270	-.00920	.00370	.05540	.01830
	GRADIENT	.02766	-.02127	.00016	-.00007	.00012	-.00131	.00000

RUN NO. 1250/ 0 RN/L = 5.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.07230	.06710	.01170	-.00780	.00270	.07400	.00950
2.990	-4.000	-.06110	.05790	.01080	-.00700	.00240	.06950	.00990
2.990	-2.000	-.02870	.03290	.01090	-.00710	.00230	.06310	.01020
2.990	.000	-.01140	.01840	.01190	-.00780	.00270	.05760	.01050
2.990	2.000	.02460	-.00830	.01070	-.00690	.00270	.05370	.01060
2.990	4.000	.06290	-.03780	.01030	-.00660	.00250	.05200	.00900
2.990	6.000	.09110	-.06030	.01000	-.00640	.00240	.04940	.00800
2.990	8.000	.09650	-.06420	.00990	-.00640	.00250	.04620	.00770
2.990	10.000	.09230	-.06150	.00970	-.00630	.00340	.04030	.00810
	GRADIENT	.01467	-.01138	-.00009	.00008	.00001	-.00247	-.00001

RUN NO. 1249/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.06800	.05650	.01440	-.00770	.00300	.07390	.00120
4.960	-4.000	-.06360	.05230	.01160	-.00620	.00240	.07160	.00130
4.960	-2.000	-.05530	.04430	.00780	-.00420	.00170	.06670	.00130
4.960	.000	-.04480	.03510	.00620	-.00340	.00150	.06130	.00130
4.960	2.000	-.03150	.02480	.00710	-.00410	.00190	.05620	.00130
4.960	4.000	-.00660	.00490	.00640	-.00370	.00150	.04760	.00100
4.960	6.000	.01800	-.01420	.00590	-.00300	.00150	.04020	.00020
4.960	8.000	.03230	-.02500	.00470	-.00240	.00150	.03380	.00000
4.960	10.000	.03500	-.02770	.00420	-.00250	.00180	.02810	.00020
	GRADIENT	.00642	-.00542	-.00082	.00040	-.00013	-.00283	-.00002

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72017) (22 FEB 73)

REFERENCE DATA

SREF =	5220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1062/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.15660	.13390	-.00440	.00120	-.00120	.03460	.01020
.601	-4.000	-.12430	.11040	.00100	-.00200	.00050	.03890	.00740
.601	-2.000	-.05430	.06270	.00370	-.00310	.00060	.04090	.00870
.601	.000	.01340	.01510	.00500	-.00450	.00180	.03970	.01010
.601	2.000	.07500	-.02750	.00360	-.00260	.00190	.04020	.00870
.601	4.000	.14220	-.07510	.00060	.00000	.00230	.03910	.00690
.601	6.000	.20450	-.12320	-.00180	.00150	.00190	.03800	.00430
.601	8.000	.26960	-.17100	.00430	-.00250	.00390	.04020	.00100
.601	10.000	.32080	-.20690	.00610	-.00350	.00480	.03910	.00160
	GRADIENT	.03321	-.02316	.00046	-.00010	.00034	.00034	-.00016

RUN NO. 1061/ 0 RN/L = 5.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.799	-5.000	-.12730	.11590	.00630	-.00470	.00110	.03270	.01770
.799	-4.000	-.09790	.09390	.00670	-.00590	.00100	.03570	.01590
.799	-2.000	-.03080	.04630	.00620	-.00530	.00100	.03960	.01320
.799	.000	.03260	.00160	.00260	-.00260	.00070	.04040	.01380
.799	2.000	.09100	-.03820	.00680	-.00480	.00270	.03820	.01460
.799	4.000	.15980	-.08830	.00680	-.00490	.00300	.03810	.01120
.799	6.000	.22580	-.13680	.00580	-.00380	.00410	.03770	.01000
.799	8.000	.27760	-.17430	.00300	-.00170	.00360	.03740	.00980
.799	10.000	.32940	-.21060	.00040	.00050	.00310	.03810	.00830
	GRADIENT	.03179	-.02249	-.00001	.00008	.00023	.00050	-.00053

RUN NO. 1060/ 0 RN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.12420	.11570	.00120	-.00200	-.00140	.03310	.02800
.902	-4.000	-.08650	.08940	.00350	-.00340	-.00010	.03480	.02700
.902	-2.000	-.01880	.04130	.00270	-.00240	-.00020	.04130	.02270
.902	.000	.04690	-.00380	.00490	-.00350	.00100	.03920	.02570
.902	2.000	.10530	-.04650	.00000	-.00010	.00010	.03810	.02280
.902	4.000	.17080	-.09420	.00080	.00030	.00180	.03630	.02140
.902	6.000	.23240	-.13890	.00020	.00050	.00280	.03520	.02170
.902	8.000	.28940	-.17860	.00020	.00060	.00290	.03640	.01950
.902	10.000	.33790	-.21410	.00020	.00090	.00300	.03610	.01950
	GRADIENT	.03249	-.02307	-.00019	.00033	.00027	.00032	-.00064

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72017) (22 FEB 73 .

REFERENCE DATA-

BREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1059/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.998	-5.000	-.12560	.12040	.00690	-.00630	-.00010	.05080	.01600
.998	-4.000	-.08560	.08910	.00800	-.00660	.00010	.04520	.01140
.998	-2.000	-.02840	.05020	.00880	-.00710	.00110	.04870	.01580
.998	.000	.05250	-.00620	.00800	-.00630	.00150	.04960	.01460
.998	2.000	.11090	-.04850	.00560	-.00420	.00110	.04710	.01600
.998	4.000	.18080	-.10030	.00540	-.00370	.00290	.04190	.01470
.998	6.000	.23540	-.14250	.00480	-.00350	.00270	.03870	.01190
.998	8.000	.28830	-.18200	.00390	-.00240	.00320	.04040	.01160
.998	10.000	.32180	-.20560	.00310	-.00120	.00360	.03860	.01190
	GRADIENT	.03385	-.02416	-.00026	.00034	.00028	-.00056	.00012

RUN NO. 1058/ 0 RN/L = 7.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.195	-5.000	-.08390	.11050	.00250	-.00360	.00060	.07310	.03220
1.195	-4.000	-.03970	.07600	.00320	-.00390	.00060	.07270	.03300
1.195	-2.000	.03930	.01570	.00590	-.00620	.00200	.07730	.03060
1.195	.000	.12720	-.04990	.00590	-.00550	.00340	.07460	.03460
1.195	2.000	.20270	-.10760	.00600	-.00520	.00460	.07640	.03450
1.195	4.000	.27990	-.16490	.00450	-.00380	.00430	.08000	.03320
1.195	6.000	.34650	-.21390	.00320	-.00250	.00450	.07970	.03280
1.195	8.000	.39660	-.25050	.00400	-.00320	.00500	.08170	.03050
1.195	10.000	.41560	-.26570	.00430	-.00310	.00600	.08200	.02730
	GRADIENT	.04048	-.03062	.00027	-.00005	.00049	.00066	.00021

RUN NO. 1179/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.07420	.09330	.00580	-.00520	.00000	.06700	.02510
1.462	-4.000	-.03580	.06480	.00640	-.00570	.00080	.06900	.02450
1.462	-2.000	.03990	.00720	.00680	-.00540	.00080	.07120	.02480
1.462	.000	.11490	-.04990	.00740	-.00510	.00140	.07130	.02600
1.462	2.000	.19470	-.11130	.00620	-.00450	.00160	.07540	.02400
1.462	4.000	.26540	-.16290	.00600	-.00410	.00210	.07890	.02380
1.462	6.000	.33190	-.21190	.00530	-.00330	.00210	.08220	.02320
1.462	8.000	.37050	-.24070	.00650	-.00400	.00250	.08480	.02200
1.462	10.000	.39830	-.25890	.00820	-.00470	.00340	.08570	.02150
	GRADIENT	.03791	-.02871	.00001	.00015	.00020	.00121	-.00011

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72017) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1228/ 0 RN/L = 6.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.959	-5.000	-.01880	.04990	.01150	-.00900	.00340	.06830	.02010
1.959	-4.000	.00830	.02760	.01250	-.00940	.00340	.06630	.02060
1.959	-2.000	.06710	-.01680	.01180	-.00890	.00320	.06420	.02100
1.959	.000	.12190	-.05930	.01040	-.00760	.00290	.06190	.02100
1.959	2.000	.17360	-.09670	.01120	-.00760	.00350	.06210	.02000
1.959	4.000	.22630	-.13410	.01170	-.00790	.00350	.06510	.01850
1.959	6.000	.28080	-.17320	.01020	-.00670	.00370	.07130	.01640
1.959	8.000	.31960	-.20230	.01100	-.00770	.00300	.07210	.01680
1.959	10.000	.31400	-.19700	.01380	-.01030	.00340	.06840	.01870
	GRADIENT	.02730	-.02050	-.00007	.00019	.00001	-.00045	-.00016

RUN NO. 1242/ 0 RN/L = 5.37 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.00280	.01370	.00900	-.00580	.00180	.07250	.00910
2.990	-4.000	.00610	.00700	.00940	-.00610	.00190	.07080	.00910
2.990	-2.000	.02400	-.00730	.01160	-.00740	.00280	.06680	.00880
2.990	.000	.04850	-.02640	.01140	-.00740	.00300	.06080	.00920
2.990	2.000	.08250	-.05380	.00920	-.00620	.00190	.05810	.00900
2.990	4.000	.13170	-.09260	.00940	-.00610	.00210	.05850	.00650
2.990	6.000	.16830	-.12150	.00880	-.00550	.00210	.05810	.00450
2.990	8.000	.18140	-.13050	.00780	-.00490	.00110	.05760	.00320
2.990	10.000	.16200	-.11560	.00820	-.00520	.00260	.05190	.00460
	GRADIENT	.01438	-.01139	.00000	-.00002	.00002	-.00175	-.00020

RUN NO. 1241/ 0 RN/L = 4.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.05480	.03490	.00880	-.00320	.00360	.07940	.00060
4.960	-4.000	-.03640	.02340	.00810	-.00360	.00260	.07320	.00060
4.960	-2.000	-.00560	.00440	.00730	-.00420	.00160	.06250	.00060
4.960	.000	.01270	-.00770	.00680	-.00410	.00150	.05500	.00050
4.960	2.000	.01400	-.01040	.00640	-.00270	.00250	.05220	.00020
4.960	4.000	.02470	-.02260	.00220	-.00150	.00020	.04600	.00000
4.960	6.000	.04840	-.04120	.00700	-.00400	.00150	.04560	-.00110
4.960	8.000	.05600	-.04650	.00330	-.00250	.00080	.03900	-.00160
4.960	10.000	.05990	-.04690	.00320	-.00180	.00180	.03100	-.00180
	GRADIENT	.00854	-.00608	-.00060	.00019	-.00026	-.00361	-.00007

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72018) (22 FEB 73)

REFERENCE DATA

SREF = 5220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1115/ 0 RN/L = 4.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.25970	.20730	.02210	-.01810	.00630	.03220	.00760
.602	-4.000	-.21830	.17840	.01710	-.01490	.00510	.03290	.00790
.602	-2.000	-.15830	.13600	.01860	-.01560	.00580	.03720	.00590
.602	.000	-.08980	.08790	.01820	-.01530	.00550	.03610	.00690
.602	2.000	-.01550	.03540	.01730	-.01440	.00560	.03640	.00610
.602	4.000	.06140	-.01850	.01710	-.01380	.00590	.03400	.00590
.602	6.000	.13240	-.07040	.01640	-.01280	.00640	.03210	.00390
.602	8.000	.19200	-.11520	.01740	-.01320	.00710	.02960	.00280
.602	10.000	.25460	-.16130	.01750	-.01310	.00720	.02920	.00070
	GRADIENT	.03511	-.02471	-.00035	.00034	-.00000	.00026	-.00020

RUN NO. 1116/ 0 RN/L = 5.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.799	-5.000	-.25280	.20520	.01860	-.01620	.00500	.03070	.01460
.799	-4.000	-.21260	.17640	.01810	-.01580	.00500	.03180	.01440
.799	-2.000	-.14240	.12670	.01850	-.01550	.00510	.03500	.01320
.799	.000	-.07050	.07690	.01980	-.01620	.00570	.03320	.01590
.799	2.000	-.00460	.03090	.02060	-.01650	.00610	.03260	.01550
.799	4.000	.06140	-.01640	.01890	-.01500	.00630	.03170	.01370
.799	6.000	.12810	-.06480	.01810	-.01410	.00630	.02950	.01180
.799	8.000	.19780	-.11580	.01790	-.01390	.00650	.02880	.00890
.799	10.000	.26120	-.16110	.01760	-.01360	.00680	.02710	.00800
	GRADIENT	.03481	-.02448	.00016	.00005	.00016	.00006	.00003

RUN NO. 1117/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.23260	.19570	.01810	-.01580	.00480	.03520	.02410
.901	-4.000	-.19490	.16820	.01640	-.01440	.00410	.03480	.02420
.901	-2.000	-.12080	.11510	.01770	-.01490	.00440	.03680	.02330
.901	.000	-.05470	.06840	.01690	-.01400	.00410	.03750	.02280
.901	2.000	.01350	.02060	.01790	-.01460	.00500	.03530	.02330
.901	4.000	.07240	-.02230	.01880	-.01500	.00550	.03320	.02150
.901	6.000	.14370	-.07460	.01690	-.01310	.00580	.03190	.01860
.901	8.000	.21270	-.12300	.01890	-.01440	.00680	.03010	.01760
.901	10.000	.26720	-.16230	.01940	-.01440	.00710	.02890	.01680
	GRADIENT	.03403	-.02424	.00013	.00005	.00010	-.00013	-.00025

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72018) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1119/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.995	-5.000	-.24000	.20910	.01730	-.01490	.00330	.05280	.02100
.995	-4.000	-.20460	.18470	.01780	-.01490	.00370	.05310	.02300
.995	-2.000	-.12680	.12750	.01760	-.01440	.00440	.05200	.02310
.995	.000	-.05010	.07180	.01740	-.01360	.00460	.05130	.02400
.995	2.000	.02270	.01870	.01750	-.01360	.00450	.04790	.02280
.995	4.000	.09480	-.03460	.01710	-.01330	.00470	.04550	.02060
.995	6.000	.17580	-.09730	.01700	-.01330	.00550	.04390	.01770
.995	8.000	.26040	-.16170	.01700	-.01280	.00530	.04360	.01810
.995	10.000	.31290	-.20230	.01690	-.01270	.00590	.04220	.01780
	GRADIENT	.03742	-.02728	-.00004	.00020	.00014	-.00083	-.00005

RUN NO. 1118/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.20120	.19820	.01290	-.01050	.00270	.07030	.03300
1.196	-4.000	-.15860	.16490	.01250	-.01020	.00300	.07040	.03280
1.196	-2.000	-.06550	.09240	.01260	-.00980	.00350	.07160	.03110
1.196	.000	.02690	.02140	.01080	-.00800	.00390	.07170	.03040
1.196	2.000	.11280	-.04360	.01120	-.00820	.00490	.07180	.03040
1.196	4.000	.19580	-.10590	.01050	-.00740	.00510	.07350	.02870
1.196	6.000	.27270	-.16360	.01000	-.00660	.00530	.07360	.02710
1.196	8.000	.32960	-.20690	.00980	-.00650	.00540	.07430	.02490
1.196	10.000	.36200	-.23330	.01000	-.00680	.00540	.07600	.02270
	GRADIENT	.04447	-.03408	-.00027	.00036	.00028	.00031	-.00045

RUN NO. 1194/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.17580	.17190	.00920	-.00790	.00200	.06530	.02820
1.463	-4.000	-.13870	.14370	.00960	-.00790	.00210	.06660	.02740
1.463	-2.000	-.06060	.08380	.00990	-.00780	.00250	.06850	.02560
1.463	.000	.02110	.02100	.00980	-.00730	.00280	.07010	.02500
1.463	2.000	.10320	-.04220	.00900	-.00670	.00280	.07210	.02350
1.463	4.000	.17910	-.09920	.00800	-.00560	.00290	.07250	.02400
1.463	6.000	.25150	-.15370	.00740	-.00490	.00290	.07260	.02380
1.463	8.000	.29590	-.18760	.00690	-.00440	.00290	.07380	.02280
1.463	10.000	.33190	-.21330	.00790	-.00490	.00350	.07400	.02190
	GRADIENT	.03975	-.03042	-.00013	.00024	.00010	.00083	-.00050

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72018) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1223/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.953	-5.000	-.09480	.10600	.01260	-.00960	.00360	.06830	.02040
1.953	-4.000	-.06480	.08240	.01290	-.00970	.00380	.06640	.02040
1.953	-2.000	-.00650	.03770	.01290	-.00960	.00400	.06390	.02060
1.953	.000	.04980	-.00640	.01240	-.00910	.00390	.06150	.02000
1.953	2.000	.10810	-.04990	.01140	-.00790	.00360	.06020	.01890
1.953	4.000	.16750	-.09220	.01230	-.00870	.00400	.06350	.01710
1.953	6.000	.22160	-.13340	.01200	-.00820	.00430	.06500	.01570
1.953	8.000	.26830	-.16860	.01160	-.00810	.00360	.06500	.01530
1.953	10.000	.27770	-.17460	.01340	-.00980	.00370	.06340	.01610
	GRADIENT	.02902	-.02201	-.00010	.00016	.00002	-.00067	-.00034

RUN NO. 1246/ 0 RN/L = 5.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.05030	.04950	.01010	-.00660	.00240	.07440	.00870
2.990	-4.000	-.04090	.04150	.01030	-.00660	.00250	.07180	.00880
2.990	-2.000	-.02050	.02440	.01000	-.00650	.00240	.06650	.00880
2.990	.000	.00180	.00670	.01080	-.00720	.00260	.06150	.00900
2.990	2.000	.04020	-.02140	.01110	-.00730	.00280	.05860	.00850
2.990	4.000	.07880	-.05190	.01060	-.00680	.00270	.05670	.00690
2.990	6.000	.11000	-.07700	.00970	-.00620	.00260	.05440	.00560
2.990	8.000	.12520	-.08790	.01000	-.00610	.00280	.05240	.00530
2.990	10.000	.11940	-.08330	.01130	-.00690	.00400	.04830	.00590
	GRADIENT	.01413	-.01105	.00009	-.00006	.00004	-.00203	-.00016

RUN NO. 1245/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.05140	.04590	.00910	-.00480	.00020	.07890	.00100
4.960	-4.000	-.04740	.04190	.00860	-.00450	.00090	.07500	.00100
4.960	-2.000	-.03800	.03320	.00790	-.00410	.00210	.06770	.00100
4.960	.000	-.02780	.02380	.00690	-.00370	.00240	.06140	.00090
4.960	2.000	-.01860	.01480	.00500	-.00260	.00140	.05650	.00070
4.960	4.000	.00000	-.00070	.00590	-.00310	.00170	.05370	.00020
4.960	6.000	.02180	-.01830	.00500	-.00270	.00150	.04810	-.00010
4.960	8.000	.04140	-.03180	.00650	-.00340	.00240	.04020	-.00050
4.960	10.000	.04670	-.03450	.00540	-.00270	.00250	.03360	-.00110
	GRADIENT	.00547	-.00500	-.00043	.00022	.00013	-.00287	-.00008

MSFC 545 (1A1) MOD ATP LV-(01)/(T3)/(S1) (R72019) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1106/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.30600	.24180	.02060	-.01810	.00700	.03550	.00860
.598	-4.000	-.27500	.21920	.02010	-.01740	.00580	.03350	.01070
.598	-2.000	-.20570	.16930	.02020	-.01710	.00650	.03350	.01000
.598	.000	-.14330	.12500	.01840	-.01590	.00600	.03550	.00950
.598	2.000	-.06950	.07360	.01980	-.01650	.00680	.03570	.00800
.598	4.000	.00390	.02120	.02050	-.01640	.00730	.03260	.00840
.598	6.000	.06960	-.02770	.01840	-.01480	.00670	.03160	.00540
.598	8.000	.12970	-.07310	.01750	-.01360	.00680	.02850	.00410
.598	10.000	.18960	-.11760	.01840	-.01400	.00740	.02590	.00230
	GRADIENT	.03433	-.02439	-.00004	.00018	.00007	-.00008	-.00017

RUN NO. 1105/ 0 RN/L = 5.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.801	-5.000	-.31730	.25140	.01820	-.01620	.00500	.03260	.01660
.801	-4.000	-.27550	.22120	.02280	-.01970	.00620	.03280	.01680
.801	-2.000	-.19600	.16430	.02140	-.01820	.00670	.03500	.01550
.801	.000	-.13010	.11830	.02160	-.01780	.00700	.03210	.01860
.801	2.000	-.06520	.07290	.02150	-.01760	.00700	.02950	.01960
.801	4.000	.00170	.02450	.02080	-.01670	.00690	.02870	.01750
.801	6.000	.06610	-.02200	.02000	-.01580	.00710	.02650	.01480
.801	8.000	.13250	-.07050	.02020	-.01570	.00750	.02190	.01400
.801	10.000	.19790	-.11760	.01970	-.01510	.00780	.01810	.01330
	GRADIENT	.03515	-.02492	.00011	.00009	.00018	-.00052	.00025

RUN NO. 1104/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.29690	.24090	.01980	-.01750	.00510	.03350	.02930
.899	-4.000	-.26350	.21610	.02060	-.01780	.00540	.03550	.02650
.899	-2.000	-.18430	.15960	.01960	-.01640	.00560	.03540	.02680
.899	.000	-.11770	.11200	.02060	-.01700	.00540	.03560	.02610
.899	2.000	-.04720	.06170	.02000	-.01660	.00520	.03350	.02520
.899	4.000	.01780	.01500	.02190	-.01750	.00660	.03190	.02350
.899	6.000	.07660	-.02870	.02160	-.01700	.00650	.02930	.02070
.899	8.000	.14780	-.07960	.02040	-.01580	.00740	.02510	.01900
.899	10.000	.20960	-.12350	.01990	-.01490	.00790	.02060	.01920
	GRADIENT	.03519	-.02521	.00015	.00004	.00010	-.00024	-.00050

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72019) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCENT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1102/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.30380	.25580	.01920	-.01700	.00420	.05610	.02130
.997	-4.000	-.26400	.22600	.01780	-.01590	.00380	.05520	.02260
.997	-2.000	-.19060	.17430	.01800	-.01540	.00450	.05640	.02480
.997	.000	-.11210	.11720	.01810	-.01490	.00480	.05610	.02480
.997	2.000	-.04230	.06540	.01980	-.01600	.00520	.05300	.02420
.997	4.000	.02880	.01340	.01880	-.01470	.00560	.04600	.02450
.997	6.000	.10430	-.04620	.01850	-.01480	.00640	.04040	.02170
.997	8.000	.18430	-.10780	.01920	-.01520	.00660	.03440	.02100
.997	10.000	.24500	-.15420	.01890	-.01450	.00680	.03060	.01900
	GRADIENT	.03699	-.02691	.00008	.00017	.00018	-.00091	.00030

RUN NO. 1103/ 0 RN/L = 6.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.27330	.25330	.01150	-.00990	.00230	.07010	.03660
1.197	-4.000	-.23110	.22040	.01210	-.01010	.00280	.06930	.03670
1.197	-2.000	-.13730	.14610	.01100	-.00890	.00300	.07010	.03440
1.197	.000	-.04580	.07550	.00960	-.00720	.00360	.07020	.03250
1.197	2.000	.04210	.00830	.01060	-.00770	.00480	.06780	.03230
1.197	4.000	.12460	-.05440	.00990	-.00700	.00560	.06650	.03090
1.197	6.000	.20050	-.11220	.00930	-.00640	.00550	.06560	.02900
1.197	8.000	.26270	-.16050	.00980	-.00680	.00610	.06600	.02730
1.197	10.000	.30500	-.19340	.01030	-.00700	.00660	.06520	.02530
	GRADIENT	.04462	-.03453	-.00022	.00036	.00036	-.00035	-.00067

RUN NO. 1191/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.468	-5.000	-.24390	.22390	.01030	-.00890	.00260	.06830	.02980
1.468	-4.000	-.20460	.19410	.01000	-.00830	.00250	.06830	.02930
1.468	-2.000	-.12910	.13390	.00970	-.00780	.00240	.06850	.02730
1.468	.000	-.04810	.07120	.00980	-.00730	.00300	.06900	.02610
1.468	2.000	.03930	.00350	.00840	-.00640	.00270	.07050	.02370
1.468	4.000	.11470	-.05350	.00850	-.00610	.00310	.07030	.02350
1.468	6.000	.19050	-.11130	.00800	-.00540	.00310	.07090	.02250
1.468	8.000	.23850	-.14850	.00740	-.00460	.00320	.07060	.02230
1.468	10.000	.27600	-.17550	.00840	-.00520	.00370	.06960	.02150
	GRADIENT	.04012	-.03112	-.00021	.00031	.00006	.00027	-.00076

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72019) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1226/ 0 RN/L = 6.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.961	-5.000	-.14190	.13970	.01140	-.00860	.00350	.06990	.01950
1.961	-4.000	-.11090	.11650	.01300	-.00960	.00410	.06730	.01960
1.961	-2.000	-.06050	.07740	.01210	-.00910	.00380	.06380	.01970
1.961	.000	-.00120	.03170	.01270	-.00930	.00400	.06090	.01960
1.961	2.000	.05670	-.01270	.01140	-.00800	.00360	.05850	.01800
1.961	4.000	.11440	-.05400	.01230	-.00860	.00420	.06020	.01660
1.961	6.000	.16570	-.09280	.01100	-.00760	.00420	.06060	.01650
1.961	8.000	.21220	-.12830	.01120	-.00790	.00350	.06030	.01600
1.961	10.000	.22370	-.13670	.01390	-.01030	.00370	.05890	.01670
	GRADIENT	.02837	-.02156	-.00001	.00008	.00003	-.00117	-.00031

RUN NO. 1251/ 0 RN/L = 5.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.08500	.07490	.01140	-.00700	.00300	.07620	.00890
2.990	-4.000	-.07230	.06480	.01110	-.00710	.00280	.07310	.00910
2.990	-2.000	-.08960	.07440	.01110	-.00700	.00270	.06790	.00900
2.990	.000	-.03060	.03090	.01100	-.00710	.00280	.06200	.00920
2.990	2.000	.01090	-.00050	.00980	-.00660	.00230	.05770	.00870
2.990	4.000	.04890	-.03010	.01020	-.00680	.00270	.05450	.00760
2.990	6.000	.07860	-.05400	.00870	-.00560	.00230	.05160	.00650
2.990	8.000	.09450	-.06540	.00930	-.00600	.00250	.04990	.00610
2.990	10.000	.09060	-.06250	.01070	-.00690	.00360	.04610	.00660
	GRADIENT	.01528	-.01192	-.00015	.00004	-.00004	-.00246	-.00012

RUN NO. 1252/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.06870	.06010	.01310	-.00700	.00320	.08080	.00200
4.960	-4.000	-.06860	.05780	.01050	-.00580	.00240	.07650	.00210
4.960	-2.000	-.06400	.05090	.00730	-.00440	.00160	.06870	.00210
4.960	.000	-.05250	.04050	.00620	-.00380	.00160	.06230	.00210
4.960	2.000	-.03310	.02620	.00700	-.00400	.00210	.05800	.00190
4.960	4.000	-.01430	.01030	.00630	-.00410	.00150	.05250	.00150
4.960	6.000	.00060	-.00780	.00500	-.00300	.00170	.04480	.00110
4.960	8.000	.02390	-.01940	.00390	-.00240	.00140	.03540	.00050
4.960	10.000	.03340	-.02550	.00260	-.00170	.00130	.03010	.00020
	GRADIENT	.00611	-.00551	-.00067	.00030	-.00014	-.00311	-.00005

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72020) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1071/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.599	-5.000	-.16400	.13930	.00890	-.00860	.00260	.03260	.00800
.599	-4.000	-.13140	.11630	.01070	-.00960	.00340	.03550	.00700
.599	-2.000	-.06320	.06900	.01190	-.01010	.00360	.03890	.00630
.599	.000	.00400	.02220	.01170	-.00990	.00400	.03900	.00670
.599	2.000	.06990	-.02370	.01150	-.00920	.00430	.03930	.00560
.599	4.000	.14070	-.07390	.01030	-.00790	.00470	.03810	.00430
.599	6.000	.21010	-.12520	.00830	-.00630	.00460	.03700	.00240
.599	8.000	.27680	-.17360	.01060	-.00790	.00580	.03820	.00000
.599	10.000	.33440	-.21490	.01130	-.00820	.00640	.03820	-.00060
	GRADIENT	.03377	-.02359	.00012	.00009	.00020	.00056	-.00034

RUN NO. 1072/ 0 RN/L = 5.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.802	-5.000	-.14710	.13000	.01430	-.01180	.00350	.03090	.01520
.802	-4.000	-.11610	.10760	.01430	-.01210	.00350	.03340	.01420
.802	-2.000	-.04860	.06050	.01350	-.01110	.00350	.03730	.01220
.802	.000	.01860	.01380	.01120	-.00930	.00340	.03790	.01290
.802	2.000	.08130	-.02930	.01360	-.01040	.00460	.03650	.01320
.802	4.000	.15070	-.07920	.01210	-.00930	.00460	.03590	.01090
.802	6.000	.22250	-.13100	.01150	-.00860	.00540	.03620	.00890
.802	8.000	.28490	-.17570	.01070	-.00790	.00540	.03750	.00720
.802	10.000	.34100	-.21480	.00940	-.00660	.00540	.03850	.00600
	GRADIENT	.03307	-.02313	-.00023	.00030	.00014	.00050	-.00036

RUN NO. 1073/ 0 RN/L = 6.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.13770	.12630	.00950	-.00870	.00150	.03350	.02440
.901	-4.000	-.10320	.10230	.01110	-.00960	.00220	.03410	.02470
.901	-2.000	-.03430	.05400	.01140	-.00950	.00230	.03850	.02220
.901	.000	.03320	.00730	.01200	-.00950	.00310	.03730	.02330
.901	2.000	.09630	-.03720	.00960	-.00770	.00300	.03670	.02210
.901	4.000	.16400	-.08600	.01020	-.00740	.00410	.03540	.02030
.901	6.000	.23270	-.13510	.00910	-.00670	.00460	.03600	.01900
.901	8.000	.29350	-.17760	.00960	-.00690	.00490	.03780	.01710
.901	10.000	.34600	-.21530	.00950	-.00640	.00510	.03840	.01660
	GRADIENT	.03343	-.02348	-.00003	.00020	.00025	.00022	-.00042

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)/(S1) (R72020) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1074/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.15590	.15000	.01160	-.01010	.00170	.05100	.02410
.999	-4.000	-.11590	.11980	.01260	-.01040	.00230	.04840	.02260
.999	-2.000	-.04670	.07140	.01260	-.01030	.00300	.05120	.02500
.999	.000	.03310	.01500	.01210	-.00960	.00330	.05170	.02440
.999	2.000	.10620	-.03790	.01080	-.00830	.00320	.04950	.02410
.999	4.000	.18930	-.10020	.01040	-.00780	.00420	.04740	.02200
.999	6.000	.26230	-.15640	.01020	-.00760	.00440	.04560	.01890
.999	8.000	.33060	-.20730	.00930	-.00650	.00470	.04910	.01850
.999	10.000	.37180	-.23780	.00860	-.00580	.00500	.04950	.01820
	GRADIENT	.03805	-.02740	-.00020	.00029	.00023	-.00021	-.00010

RUN NO. 1075/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.201	-5.000	-.10420	.12430	.00870	-.00750	.00190	.06890	.03340
1.201	-4.000	-.06230	.09190	.00930	-.00770	.00210	.06950	.03350
1.201	-2.000	.02370	.02600	.01070	-.00870	.00300	.07350	.03150
1.201	.000	.11570	-.04350	.00960	-.00720	.00380	.07380	.03270
1.201	2.000	.20020	-.10740	.00900	-.00660	.00460	.07590	.03250
1.201	4.000	.28400	-.16920	.00740	-.00520	.00450	.07930	.03110
1.201	6.000	.35580	-.22170	.00660	-.00420	.00480	.08040	.03060
1.201	8.000	.41200	-.26220	.00650	-.00410	.00520	.08260	.02850
1.201	10.000	.44270	-.28490	.00640	-.00390	.00590	.08440	.02600
	GRADIENT	.04340	-.03284	-.00015	.00026	.00033	.00110	-.00020

RUN NO. 1182/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.08870	.10650	.00850	-.00720	.00160	.06690	.02580
1.462	-4.000	-.05100	.07860	.00900	-.00740	.00200	.06890	.02510
1.462	-2.000	.02780	.01900	.00890	-.00690	.00210	.07170	.02430
1.462	.000	.10620	-.04050	.00900	-.00640	.00240	.07350	.02430
1.462	2.000	.18680	-.10180	.00800	-.00570	.00240	.07720	.02250
1.462	4.000	.26260	-.15770	.00740	-.00490	.00270	.08030	.02220
1.462	6.000	.33500	-.21130	.00660	-.00410	.00260	.08290	.02180
1.462	8.000	.38060	-.24500	.00690	-.00410	.00280	.08560	.02070
1.462	10.000	.41470	-.26810	.00780	-.00460	.00340	.08740	.01990
	GRADIENT	.03922	-.02958	-.00014	.00027	.00011	.00144	-.00040

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)/(S1) (R72020) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1227/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.961	-5.000	-.02600	.05340	.01240	-.00960	.00380	.06870	.01990
1.961	-4.000	.00260	.03040	.01300	-.00970	.00380	.06730	.01990
1.961	-2.000	.06170	-.01470	.01260	-.00940	.00380	.06590	.01960
1.961	.000	.11740	-.05750	.01150	-.00830	.00350	.06420	.01920
1.961	2.000	.17350	-.09840	.01150	-.00780	.00370	.06480	.01780
1.961	4.000	.23280	-.14010	.01220	-.00830	.00400	.06880	.01610
1.961	6.000	.28910	-.18130	.01110	-.00740	.00410	.07320	.01430
1.961	8.000	.33410	-.21470	.01140	-.00780	.00360	.07450	.01410
1.961	10.000	.33680	-.21460	.01360	-.00980	.00400	.07220	.01530
	GRADIENT	.02865	-.02146	-.00011	.00021	.00001	-.00011	-.00040

RUN NO. 1243/ 0 RN/L = 5.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.00850	.01870	.00950	-.00610	.00220	.07450	.00860
2.990	-4.000	.00050	.01160	.01010	-.00650	.00250	.07270	.00860
2.990	-2.000	.02010	-.00420	.01110	-.00690	.00300	.06870	.00830
2.990	.000	.04160	-.02100	.01100	-.00690	.00310	.06410	.00840
2.990	2.000	.07530	-.04700	.01010	-.00650	.00250	.06180	.00790
2.990	4.000	.11660	-.07960	.00990	-.00650	.00250	.06110	.00610
2.990	6.000	.15020	-.10600	.00920	-.00570	.00250	.06000	.00450
2.990	8.000	.16910	-.11990	.00830	-.00510	.00200	.05910	.00320
2.990	10.000	.16420	-.11490	.00860	-.00540	.00270	.05510	.00380
	GRADIENT	.01351	-.01061	.00002	-.00003	.00002	-.00159	-.00023

RUN NO. 1244/ 0 RN/L = 4.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04680	.04120	.00980	-.00400	.00360	.08260	.00020
4.960	-4.000	-.03420	.03180	.00900	-.00410	.00290	.07700	.00040
4.960	-2.000	-.01190	.01490	.00770	-.00410	.00200	.06710	.00060
4.960	.000	.00460	.00180	.00680	-.00380	.00160	.06000	.00060
4.960	2.000	.01330	-.00590	.00630	-.00290	.00200	.05650	.00030
4.960	4.000	.02700	-.01900	.00410	-.00200	.00120	.05120	.00000
4.960	6.000	.04430	-.03410	.00610	-.00320	.00180	.04890	-.00060
4.960	8.000	.05610	-.04360	.00410	-.00230	.00130	.04360	-.00110
4.960	10.000	.05940	-.04460	.00440	-.00240	.00190	.03690	-.00140
	GRADIENT	.00804	-.00652	-.00058	.00022	-.00023	-.00343	-.00002

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72021) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2329/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.670	-.06390	.06850	.10860	-.07440	.03770	.02270	.02180
.600	-3.640	-.06200	.06940	.07300	-.05080	.02690	.02560	.02060
.600	-1.560	-.05870	.06840	.03650	-.02580	.01540	.02850	.01910
.600	.480	-.06100	.06980	.00000	-.00080	.00370	.02920	.01930
.600	2.550	-.05950	.06810	-.03760	.02470	-.00820	.02760	.02020
.600	4.580	-.06020	.06780	-.07470	.05050	-.02060	.02500	.02060
.600	6.610	-.06610	.07020	-.10940	.07410	-.03130	.02270	.02080
.600	.480	-.05810	.06890	-.00120	.00000	.00330	.02840	.02020
	GRADIENT	.00014	-.00017	-.01798	.01232	-.00577	-.00010	.00005

RUN NO. 2330/ 0 RN/L = 5.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.801	-5.750	-.04030	.05460	.11480	-.07920	.04040	.02650	.02480
.801	-3.690	-.03800	.05460	.07630	-.05380	.02820	.02840	.02360
.801	-1.590	-.03830	.05660	.03690	-.02620	.01490	.03060	.02290
.801	.480	-.03380	.05450	-.00140	.00020	.00170	.03050	.02320
.801	2.580	-.03260	.05290	-.03890	.02640	-.01090	.02950	.02350
.801	4.640	-.03520	.05270	-.07820	.05380	-.02370	.02600	.02510
.801	6.700	-.04150	.05650	-.11550	.07890	-.03570	.02410	.02580
.801	.480	-.03350	.05450	.00030	-.00110	.00240	.03080	.02280
	GRADIENT	.00054	-.00036	-.01847	.01286	-.00622	-.00028	.00017

RUN NO. 2331/ 0 RN/L = 6.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.810	-.01630	.03930	.11400	-.07860	.04160	.03000	.02950
.902	-3.730	-.01040	.03680	.07770	-.05440	.02970	.03130	.02920
.902	-1.600	-.01110	.03880	.03490	-.02440	.01430	.03370	.02860
.902	.490	-.01250	.04120	-.00390	.00250	.00030	.03390	.02860
.902	2.570	-.01110	.03910	-.04300	.03010	-.01350	.03260	.02900
.902	4.660	-.01070	.03820	-.08170	.05750	-.02670	.02910	.03060
.902	6.760	-.01460	.03960	-.11980	.08300	-.04010	.02880	.03050
.902	.480	-.00820	.03790	-.00090	.00040	.00130	.03330	.02800
	GRADIENT	-.00003	.00015	-.01894	.01328	-.00671	-.00026	.00015

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72021) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2333/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.002	-5.830	-.01890	.04880	.11440	-.07920	.04620	.04900	.02920
1.002	-3.740	-.01940	.05290	.07230	-.05020	.03010	.05220	.03020
1.002	-1.610	-.01760	.05360	.03330	-.02270	.01470	.05480	.03030
1.002	.490	-.01600	.05260	-.00750	.00560	-.00110	.05360	.03090
1.002	2.590	-.02010	.05670	-.04690	.03330	-.01670	.05380	.03350
1.002	4.700	-.01420	.04850	-.08860	.06240	-.03260	.04900	.03060
1.002	6.790	-.01860	.05230	-.12870	.08970	-.04720	.04960	.03440
1.002	.500	-.01950	.05630	-.00750	.00510	-.00080	.05490	.03330
	GRADIENT	.00038	-.00027	-.01907	.01334	-.00744	-.00035	.00019

RUN NO. 2332/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.910	.04440	.00680	.11090	-.07190	.04800	.05930	.04220
1.197	-3.790	.04410	.00980	.06870	-.04450	.03100	.06110	.04170
1.197	-1.620	.05140	.00630	.03020	-.01920	.01480	.06230	.04140
1.197	.500	.05080	.00770	-.00610	.00370	-.00120	.06190	.04230
1.197	2.620	.05180	.00540	-.04130	.02630	-.01660	.06160	.04180
1.197	4.750	.06480	-.00620	-.08220	.05310	-.03340	.05960	.04260
1.197	6.870	.06290	-.00800	-.12130	.07820	-.04910	.05730	.04270
1.197	.500	.05520	.00360	-.00600	.00320	-.00070	.06240	.04210
	GRADIENT	.00196	-.00154	-.01751	.01129	-.00751	-.00017	.00010

RUN NO. 2307/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.890	.03690	.00900	.11650	-.07660	.04500	.06510	.03330
1.463	-3.800	.04660	.00420	.07390	-.04880	.02970	.06590	.03290
1.463	-1.630	.05380	.00000	.03150	-.02040	.01370	.06510	.03350
1.463	.500	.05580	-.00120	-.00820	.00590	-.00090	.06600	.03280
1.463	2.660	.05580	-.00150	-.05130	.03500	-.01660	.06310	.03510
1.463	4.770	.05350	-.00110	-.09460	.06440	-.03260	.06210	.03610
1.463	6.930	.04910	-.00040	-.13730	.09170	-.04740	.06140	.03560
1.463	.480	.05560	-.00080	-.00790	.00530	-.00050	.06510	.03350
	GRADIENT	.00074	-.00057	-.01959	.01315	-.00723	-.00045	.00037

MSFC 545 (1A1) MOD ATP LV-(01)/(T3)/(S1) (R72021) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2304/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.965	-5.990	.04950	-.00670	.12130	-.07720	.04010	.06290	.02300
1.965	-3.840	.06500	-.01760	.07620	-.04870	.02540	.05900	.02300
1.965	-1.640	.07170	-.02080	.03360	-.02130	.01160	.05820	.02310
1.965	.510	.07580	-.02260	-.00700	.00510	-.00150	.05820	.02380
1.965	2.660	.07470	-.02120	-.04800	.03180	-.01510	.05960	.02390
1.965	4.830	.06930	-.01800	-.09130	.05950	-.02920	.06020	.02450
1.965	6.980	.06410	-.01610	-.13520	.08650	-.04320	.06020	.02510
1.965	.460	.07540	-.02320	-.00850	.00600	-.00190	.05720	.02380
	GRADIENT	.00054	-.00006	-.01925	.01245	-.00628	.00018	.00018

RUN NO. 2290/ 0 RN/L = 5.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.750	.02500	-.00790	.09250	-.06060	.02680	.05630	.01390
2.990	-3.690	.02430	-.00820	.06070	-.03990	.01690	.05660	.01360
2.990	-1.590	.02540	-.00850	.03060	-.02050	.00860	.05720	.01340
2.990	.480	.02730	-.00960	-.00230	.00110	-.00030	.05650	.01330
2.990	2.590	.03160	-.01310	-.03560	.02300	-.00920	.05630	.01300
2.990	4.650	.03470	-.01590	-.06780	.04410	-.01830	.05550	.01330
2.990	6.730	.03580	-.01620	-.09930	.06460	-.02840	.05440	.01370
2.990	.480	.02910	-.01010	-.00280	.00150	-.00030	.05690	.01330
	GRADIENT	.00129	-.00096	-.01549	.01014	-.00423	-.00015	-.00005

RUN NO. 2289/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.570	-.01520	.01250	.05920	-.03700	.01710	.05760	.00300
4.960	-3.580	-.01480	.01220	.03670	-.02200	.01050	.05690	.00310
4.960	-1.520	-.01420	.01460	.01860	-.01020	.00570	.05850	.00320
4.960	.480	-.01340	.01340	-.00060	.00020	.00020	.05840	.00310
4.960	2.520	-.01290	.01290	-.02040	.01150	-.00550	.05680	.00320
4.960	4.530	-.01150	.00980	-.03960	.02350	-.01050	.05540	.00320
4.960	6.550	-.01130	.00800	-.06370	.03910	-.01810	.05610	.00330
4.960	.480	-.01310	.01310	-.00170	.00090	-.00010	.05800	.00330
	GRADIENT	.00039	-.00032	-.00946	.00556	-.00263	-.00023	.00001

MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1) (R72022) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1133/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.19900	.15990	.01260	-.01170	.00190	.03490	.00490
.600	-4.000	-.16910	.13800	.01140	-.01060	.00210	.03530	.00530
.600	-2.000	-.10280	.09060	.01280	-.01150	.00280	.03880	.00440
.600	.000	-.04450	.04850	.01300	-.01140	.00320	.03970	.00380
.600	2.000	.01940	.00260	.01150	-.01010	.00340	.04100	.00200
.600	4.000	.08600	-.04530	.01120	-.00930	.00400	.03910	.00210
.600	6.000	.14450	-.08850	.01030	-.00820	.00370	.03930	-.00140
.600	8.000	.20750	-.13640	.01090	-.00820	.00490	.03850	-.00290
.600	10.000	.26280	-.17920	.01120	-.00850	.00560	.03860	-.00460
	GRADIENT	.03153	-.02269	-.00010	.00021	.00023	.00059	-.00038

RUN NO. 1011/ 1 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.23220	.20020	-.01390	.00880	-.00320	.02500	.04090
.903	-4.000	-.20170	.17750	-.01360	.00870	-.00340	.02350	.04190
.903	-2.000	-.13440	.12820	-.01150	.00730	-.00270	.02390	.04080
.903	.000	-.07340	.08410	-.00770	.00410	-.00170	.02320	.04000
.903	2.000	-.00200	.03200	-.00710	.00360	-.00150	.02440	.03710
.903	4.000	.06230	-.01470	-.00340	.00120	-.00030	.02390	.03310
.903	6.000	.13600	-.07010	-.00100	-.00030	.00030	.02270	.02880
.903	8.000	.19920	-.11900	.00120	-.00190	.00100	.02550	.02320
.903	10.000	.24600	-.15830	.00590	-.00520	.00250	.03250	.01530
	GRADIENT	.03283	-.02394	.00117	-.00088	.00033	-.00004	-.00086

RUN NO. 1013/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.25380	.22310	.01540	-.01400	.00340	.04530	.02300
1.000	-4.000	-.22220	.19840	.01630	-.01460	.00330	.04370	.02320
1.000	-2.000	-.15430	.15020	.01500	-.01330	.00360	.04560	.02280
1.000	.000	-.08250	.09810	.01560	-.01350	.00420	.04550	.02160
1.000	2.000	-.00390	.04100	.01580	-.01320	.00480	.04450	.02050
1.000	4.000	.08540	-.02610	.01650	-.01330	.00570	.04230	.01830
1.000	6.000	.16420	-.08720	.01600	-.01270	.00560	.04230	.01520
1.000	8.000	.21970	-.13210	.01510	-.01190	.00590	.04500	.01020
1.000	10.000	.26350	-.17080	.01380	-.01060	.00620	.05070	.00480
	GRADIENT	.03738	-.02731	.00007	.00012	.00026	-.00020	-.00052

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1) (R72022) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1012/ 0 RN/L = 6.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.21800	.21680	.01010	-.00890	.00250	.06330	.03070
1.196	-4.000	-.18450	.18990	.01040	-.00940	.00320	.06330	.03060
1.196	-2.000	-.10750	.13040	.01090	-.00940	.00400	.06390	.02980
1.196	.000	-.02340	.06580	.01100	-.00890	.00470	.06380	.03020
1.196	2.000	.06990	-.00680	.01050	-.00820	.00470	.06480	.02960
1.196	4.000	.15230	-.07070	.01040	-.00760	.00500	.06510	.02810
1.196	6.000	.22020	-.12390	.00910	-.00650	.00530	.06380	.02540
1.196	8.000	.26570	-.15910	.00870	-.00610	.00610	.06280	.02190
1.196	10.000	.28830	-.17830	.00770	-.00530	.00530	.06160	.01750
	GRADIENT	.04163	-.03227	.00002	.00017	.00027	.00021	-.00024

RUN NO. 1165/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.16020	.16650	.00630	-.00610	.00140	.06230	.02360
1.462	-4.000	-.13160	.14410	.00680	-.00660	.00140	.06210	.02400
1.462	-2.000	-.06530	.09330	.00770	-.00670	.00210	.06290	.02360
1.462	.000	.00840	.03670	.00740	-.00620	.00210	.06500	.02390
1.462	2.000	.07390	-.01330	.00670	-.00510	.00240	.06690	.02330
1.462	4.000	.13270	-.05960	.00700	-.00490	.00280	.06650	.02350
1.462	6.000	.18860	-.10380	.00680	-.00460	.00280	.06680	.02200
1.462	8.000	.23800	-.14240	.00640	-.00390	.00290	.06810	.01940
1.462	10.000	.27420	-.17000	.00620	-.00330	.00300	.06850	.01770
	GRADIENT	.03318	-.02555	.00004	.00018	.00015	.00058	-.00004

RUN NO. 1200/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.963	-5.000	-.08240	.10090	.00970	-.00770	.00260	.07310	.01740
1.963	-4.000	-.05330	.07890	.00930	-.00690	.00270	.07240	.01770
1.963	-2.000	.00290	.03470	.00740	-.00470	.00240	.07170	.01820
1.963	.000	.05560	-.00680	.00600	-.00330	.00240	.06960	.01900
1.963	2.000	.10780	-.04980	.00490	-.00230	.00200	.06840	.01740
1.963	4.000	.15030	-.08250	.00500	-.00220	.00210	.07100	.01580
1.963	6.000	.18710	-.10840	.00710	-.00380	.00280	.07400	.01480
1.963	8.000	.21790	-.12940	.00980	-.00610	.00360	.07470	.01350
1.963	10.000	.23320	-.14130	.01270	-.00860	.00440	.07230	.01280
	GRADIENT	.02609	-.02065	-.00058	.00065	-.00007	-.00037	-.00014

MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1) (R72022) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT.	XMRP =	.0000	
LREF = 1320.0000 IN.	YMRP =	.0000	
BREF = 1320.0000 IN.	ZMRP =	.0000	
SCALE = 100.0000 PERCNT			

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1279/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.01940	.02240	.00390	-.00200	.00050	.07520	-.00030
4.960	-4.000	-.01500	.01950	.00570	-.00340	.00100	.07290	.00020
4.960	-2.000	-.00590	.01270	.00820	-.00530	.00180	.06770	.00110
4.960	.000	.00150	.00570	.00880	-.00570	.00220	.06170	.00150
4.960	2.000	.00390	.00030	.00650	-.00420	.00170	.05470	.00140
4.960	4.000	.01510	-.00970	.00930	-.00610	.00240	.04900	.00120
4.960	6.000	.02540	-.01890	.00980	-.00540	.00290	.04750	.00070
4.960	8.000	.02950	-.02370	.01040	-.00590	.00360	.04160	.00070
4.960	10.000	.03460	-.02870	.00900	-.00560	.00330	.03460	.00070
	GRADIENT	.00362	-.00347	.00044	-.00034	.00018	-.00296	.00017

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72023) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCENT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1044/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.23940	.18450	.00850	-.00950	.00190	.04500	-.00110
.601	-4.000	-.21050	.16410	.01370	-.01300	.00310	.04260	.00250
.601	-2.000	-.13770	.11130	.01080	-.01060	.00310	.04430	.00200
.601	.000	-.08310	.07180	.01190	-.01090	.00370	.04580	.00070
.601	2.000	-.01820	.02590	.01070	-.00970	.00370	.04560	.00000
.601	4.000	.04640	-.02000	.01180	-.00990	.00430	.04480	-.00070
.601	6.000	.10430	-.06270	.01090	-.00890	.00400	.04300	-.00230
.601	8.000	.16560	-.10990	.00930	-.00740	.00450	.04050	-.00440
.601	10.000	.21770	-.15140	.00900	-.00720	.00500	.03850	-.00610
	GRADIENT	.03170	-.02271	.00010	.00014	.00021	.00016	-.00014

RUN NO. 1043/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.904	-5.000	-.22870	.18120	.02510	-.02220	.00560	.05530	-.00110
.904	-4.000	-.20020	.16090	.02110	-.01890	.00400	.05230	.00160
.904	-2.000	-.14090	.11810	.01770	-.01600	.00360	.04980	.00600
.904	.000	-.08870	.08300	.01740	-.01490	.00470	.04670	.01010
.904	2.000	-.02830	.04090	.01560	-.01310	.00450	.04550	.01030
.904	4.000	.03190	-.00190	.01290	-.01090	.00420	.04400	.00900
.904	6.000	.09450	-.04780	.01180	-.00970	.00420	.04070	.00780
.904	8.000	.15680	-.09550	.01130	-.00910	.00450	.03780	.00650
.904	10.000	.20590	-.13580	.01340	-.01040	.00540	.03960	.00250
	GRADIENT	.02879	-.02016	-.00117	.00113	-.00005	-.00121	.00121

RUN NO. 1041/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.26760	.22270	.01510	-.01450	.00330	.05760	.01160
.999	-4.000	-.24450	.20600	.01470	-.01410	.00320	.05600	.01250
.999	-2.000	-.17580	.15510	.01630	-.01470	.00350	.05290	.01240
.999	.000	-.11150	.10940	.01620	-.01410	.00430	.05220	.01280
.999	2.000	-.04300	.06000	.01520	-.01290	.00450	.05190	.01130
.999	4.000	.02650	.00900	.01460	-.01210	.00520	.04980	.00950
.999	6.000	.10180	-.04850	.01480	-.01200	.00560	.04640	.00730
.999	8.000	.16440	-.09710	.01560	-.01240	.00600	.04660	.00530
.999	10.000	.21330	-.13680	.01500	-.01170	.00640	.04960	.00140
	GRADIENT	.03300	-.02394	-.00002	.00025	.00022	-.00079	-.00023

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72023) (22 FEB 73

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1042/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-5.000	-.27110	.25090	.00910	-.00870	.00050	.07560	.01610
1.200	-4.000	-.23100	.21960	.00970	-.00880	.00120	.07400	.01760
1.200	-2.000	-.15960	.16540	.01160	-.01050	.00250	.07120	.02000
1.200	.000	-.08920	.11120	.01120	-.00950	.00320	.06940	.02180
1.200	2.000	.00230	.03880	.01060	-.00850	.00420	.06990	.01960
1.200	4.000	.08440	-.02530	.00960	-.00720	.00470	.06790	.01910
1.200	6.000	.15390	-.08040	.00850	-.00640	.00480	.06410	.01870
1.200	8.000	.20380	-.11930	.00780	-.00560	.00520	.06040	.01740
1.200	10.000	.23340	-.14380	.00740	-.00510	.00480	.05790	.01420
	GRADIENT	.03924	-.03047	.00006	.00016	.00047	-.00079	.00033

RUN NO. 1174/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.459	-5.000	-.20950	.20300	.00800	-.00660	.00260	.06650	.02130
1.459	-4.000	-.18210	.18030	.00720	-.00650	.00170	.06560	.02170
1.459	-2.000	-.11750	.13070	.00820	-.00710	.00270	.06400	.02350
1.459	.000	-.05020	.07990	.00750	-.00600	.00290	.06410	.02410
1.459	2.000	.01750	.02690	.00790	-.00630	.00330	.06400	.02450
1.459	4.000	.07510	-.01860	.00770	-.00570	.00360	.06420	.02340
1.459	6.000	.12970	-.06200	.00700	-.00480	.00340	.06320	.02260
1.459	8.000	.17550	-.09800	.00670	-.00420	.00350	.06330	.02040
1.459	10.000	.21280	-.12700	.00630	-.00370	.00340	.06370	.01870
	GRADIENT	.03218	-.02493	.00000	.00010	.00016	-.00024	.00029

RUN NO. 1201/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.960	-5.000	-.12300	.12300	.02350	-.02290	.00740	.06820	.01560
1.960	-4.000	-.10050	.10890	.02430	-.02180	.00780	.06890	.01660
1.960	-2.000	-.05560	.07560	.02070	-.01750	.00660	.06660	.01850
1.960	.000	.00680	.02750	.01570	-.01310	.00530	.06490	.01910
1.960	2.000	.06070	-.01530	.01240	-.00960	.00450	.06380	.01850
1.960	4.000	.10160	-.04790	.01100	-.00770	.00400	.06480	.01730
1.960	6.000	.13760	-.07440	.01060	-.00700	.00400	.06780	.01520
1.960	8.000	.16910	-.09700	.01220	-.00840	.00440	.06880	.01580
1.960	10.000	.19160	-.11320	.01520	-.01080	.00510	.06720	.01330
	GRADIENT	.02572	-.01966	-.00160	.00180	-.00044	-.00053	.00021

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72023) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1281/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.00480	.02020	.01870	-.01020	.00460	.08310	.00030
4.960	-4.000	-.01670	.02470	.01390	-.00810	.00340	.07710	.00080
4.960	-2.000	-.02650	.02680	.00950	-.00610	.00220	.06790	.00150
4.960	.000	-.02480	.02280	.00840	-.00550	.00200	.06110	.00180
4.960	2.000	-.01770	.01510	.00810	-.00510	.00200	.05570	.00150
4.960	4.000	-.00230	.00210	.00950	-.00580	.00230	.05080	.00120
4.960	6.000	.01220	-.01080	.01030	-.00590	.00240	.04730	.00080
4.960	8.000	.01650	-.01530	.00960	-.00560	.00280	.03970	.00090
4.960	10.000	.02100	-.01970	.00780	-.00500	.00270	.03180	.00110
	GRADIENT	.00036	-.00200	-.00094	.00046	-.00023	-.00354	.00010

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72024) (22 FEB 73

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1045/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.15190	.12960	.01060	-.00960	.00100	.03230	.00820
.601	-4.000	-.11570	.10320	.00840	-.00830	.00210	.03710	.00450
.601	-2.000	-.05150	.05750	.01070	-.00950	.00330	.04060	.00420
.601	.000	-.01180	.03020	.01310	-.01070	.00410	.04100	.00460
.601	2.000	.07110	-.02990	.00810	-.00690	.00330	.04450	.00210
.601	4.000	.13990	-.07870	.00610	-.00510	.00330	.04600	-.00070
.601	6.000	.19860	-.12220	.00690	-.00500	.00310	.04420	-.00140
.601	8.000	.27120	-.17490	.00670	-.00500	.00420	.04630	-.00350
.601	10.000	.32600	-.21700	.00300	-.00260	.00420	.04950	-.00560
	GRADIENT	.03168	-.02258	-.00033	.00040	.00023	.00137	-.00077

RUN NO. 1046/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.904	-5.000	-.16080	.15250	-.01240	.00760	-.00320	.02300	.04140
.904	-4.000	-.13160	.13010	-.01020	.00580	-.00260	.02600	.03760
.904	-2.000	-.06030	.07860	-.00540	.00280	-.00100	.02800	.03570
.904	.000	-.01190	.04290	.00330	-.00410	.00080	.03110	.03090
.904	2.000	.07260	-.01860	.00160	-.00320	.00120	.03350	.02670
.904	4.000	.14700	-.07280	.00460	-.00460	.00190	.03540	.02210
.904	6.000	.21820	-.12450	.00840	-.00710	.00350	.03860	.01900
.904	8.000	.27090	-.16610	.00920	-.00800	.00410	.04600	.01270
.904	10.000	.31120	-.20130	.01050	-.00900	.00510	.05470	.00580
	GRADIENT	.03392	-.02479	.00197	-.00145	.00059	.00133	-.00205

RUN NO. 1047/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.18140	.17230	.01420	-.01310	.00220	.03740	.02540
.999	-4.000	-.14950	.14660	.01570	-.01460	.00300	.03830	.02280
.999	-2.000	-.07780	.09830	.01460	-.01330	.00320	.04330	.02390
.999	.000	-.00140	.04330	.01690	-.01470	.00480	.04430	.02200
.999	2.000	.07820	-.01570	.01610	-.01330	.00570	.04410	.02120
.999	4.000	.17100	-.08560	.01450	-.01170	.00590	.04580	.01790
.999	6.000	.23340	-.13420	.01400	-.01140	.00580	.04930	.01630
.999	8.000	.27550	-.16940	.01280	-.01080	.00610	.05320	.01070
.999	10.000	.31570	-.20430	.01070	-.00930	.00640	.06050	.00780
	GRADIENT	.03891	-.02826	.00006	.00016	.00043	.00091	-.00067

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72024) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCENT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1048/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.14530	.16570	.00900	-.00820	.00250	.06050	.03690
1.199	-4.000	-.10830	.13640	.00930	-.00880	.00330	.06180	.03540
1.199	-2.000	-.02840	.07400	.00940	-.00840	.00390	.06520	.03230
1.199	.000	.06190	.00460	.01020	-.00850	.00480	.06770	.03120
1.199	2.000	.15370	-.06600	.01070	-.00810	.00460	.07120	.03070
1.199	4.000	.24040	-.13190	.01010	-.00720	.00540	.07390	.02880
1.199	6.000	.29250	-.17230	.00890	-.00640	.00590	.07560	.02460
1.199	8.000	.33120	-.20000	.00600	-.00410	.00570	.07490	.02080
1.199	10.000	.34980	-.21500	.00380	-.00250	.00450	.07640	.01750
	GRADIENT	.04324	-.03336	.00016	.00012	.00029	.00150	-.00084

RUN NO. 1175/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.08490	.10960	.00590	-.00570	.00090	.06100	.02480
1.460	-4.000	-.05230	.08570	.00700	-.00640	.00170	.06080	.02570
1.460	-2.000	.01680	.03330	.00610	-.00540	.00200	.06330	.02480
1.460	.000	.08510	-.01820	.00680	-.00600	.00180	.06650	.02390
1.460	2.000	.15470	-.06960	.00600	-.00450	.00240	.06900	.02320
1.460	4.000	.21250	-.11520	.00700	-.00470	.00340	.06940	.02390
1.460	6.000	.27350	-.16380	.00660	-.00420	.00380	.07140	.02280
1.460	8.000	.32740	-.20530	.00590	-.00330	.00410	.07580	.02040
1.460	10.000	.35870	-.22810	.00640	-.00310	.00490	.07910	.01800
	GRADIENT	.03347	-.02525	.00004	.00016	.00022	.00108	-.00021

RUN NO. 1204/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.959	-5.000	-.01260	.05190	.00390	-.00080	.00060	.07610	.01980
1.959	-4.000	.01990	.02460	.00290	-.00050	.00060	.07440	.01960
1.959	-2.000	.07730	-.02140	.00370	-.00120	.00110	.07360	.01960
1.959	.000	.12970	-.06330	.00520	-.00230	.00200	.07240	.01930
1.959	2.000	.18270	-.10650	.00470	-.00210	.00180	.07240	.01750
1.959	4.000	.22410	-.13650	.00500	-.00270	.00200	.07480	.01610
1.959	6.000	.26370	-.16280	.00700	-.00470	.00260	.07640	.01610
1.959	8.000	.29540	-.18180	.00890	-.00660	.00290	.07930	.01460
1.959	10.000	.29770	-.18320	.01020	-.00730	.00290	.07680	.01460
	GRADIENT	.02644	-.02110	.00020	-.00024	.00018	-.00019	-.00039

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72024) (22 FEB 73 .

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCENT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1277/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	.01090	-.00670	.00240	.00200	-.00410	.07080	-.00040
4.960	-4.000	.02550	-.01510	.00400	-.00040	-.00220	.07030	.00010
4.960	-2.000	.04510	-.02650	.00570	-.00350	.00070	.06780	.00070
4.960	.000	.05180	-.03010	.00690	-.00480	.00260	.06440	.00100
4.960	2.000	.04490	-.02400	.00950	-.00460	.00310	.06090	.00090
4.960	4.000	.04130	-.02640	.00750	-.00400	.00250	.05560	.00040
4.960	6.000	.06370	-.04500	.00940	-.00440	.00360	.05080	.00000
4.960	8.000	.05180	-.03910	.00970	-.00570	.00420	.04310	-.00050
4.960	10.000	.05150	-.04080	.00950	-.00580	.00390	.03810	-.00030
	GRADIENT	.00314	-.00187	.00065	-.00065	.00076	-.00167	.00010

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72025) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1132/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.21470	.16910	.01180	-.01120	.00250	.03540	.00420
.600	-4.000	-.17900	.14360	.01640	-.01440	.00390	.03800	.00290
.600	-2.000	-.11310	.09700	.01680	-.01460	.00430	.04090	.00160
.600	.000	-.04720	.05170	.01810	-.01500	.00490	.04260	.00120
.600	2.000	.02220	.00290	.01920	-.01530	.00570	.04220	.00090
.600	4.000	.08480	-.04240	.01900	-.01460	.00590	.04090	.00030
.600	6.000	.14820	-.08910	.01740	-.01370	.00570	.03850	-.00080
.600	8.000	.21270	-.13780	.01600	-.01260	.00540	.03940	-.00530
.600	10.000	.27610	-.18540	.01600	-.01250	.00590	.03910	-.00650
	GRADIENT	.03332	-.02344	.00067	-.00028	.00034	.00061	-.00039

RUN NO. 1131/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.22610	.18880	.01200	-.01090	.00290	.03360	.02020
.902	-4.000	-.19020	.16180	.01340	-.01190	.00280	.03430	.01880
.902	-2.000	-.12200	.11200	.01630	-.01390	.00400	.03580	.01740
.902	.000	-.05200	.06150	.01930	-.01580	.00510	.03870	.01350
.902	2.000	.01510	.01350	.01810	-.01460	.00500	.04190	.00850
.902	4.000	.08840	-.03910	.02130	-.01640	.00620	.04280	.00380
.902	6.000	.16750	-.09770	.02110	-.01570	.00640	.04400	-.00130
.902	8.000	.23790	-.15010	.02310	-.01710	.00760	.04860	-.00730
.902	10.000	.29510	-.19580	.02460	-.01830	.00870	.05740	-.01570
	GRADIENT	.03474	-.02514	.00097	-.00057	.00037	.00111	-.00161

RUN NO. 1129/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.25570	.22240	.01910	-.01660	.00580	.04980	.01870
1.000	-4.000	-.22170	.19780	.01960	-.01680	.00560	.04850	.01870
1.000	-2.000	-.14520	.14050	.02020	-.01690	.00560	.04790	.01640
1.000	.000	-.06990	.08480	.02090	-.01700	.00600	.04980	.01420
1.000	2.000	.01140	.02530	.01850	-.01510	.00560	.04820	.01230
1.000	4.000	.09430	-.03610	.01940	-.01510	.00590	.04880	.00790
1.000	6.000	.17830	-.09780	.01960	-.01540	.00620	.05170	.00570
1.000	8.000	.24510	-.14960	.01830	-.01400	.00640	.05310	.00200
1.000	10.000	.29880	-.19500	.01610	-.01200	.00650	.06050	-.00390
	GRADIENT	.03890	-.02875	-.00003	.00020	.00002	-.00005	-.00117

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1) (R72025) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1130/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-5.000	-.22370	.21990	.01290	-.01080	.00350	.06380	.02750
1.200	-4.000	-.18520	.18940	.01300	-.01070	.00380	.06420	.02650
1.200	-2.000	-.10640	.12850	.01390	-.01120	.00430	.06500	.02520
1.200	.000	-.02190	.06320	.01310	-.01020	.00470	.06680	.02300
1.200	2.000	.06570	-.00490	.01180	-.00890	.00520	.06890	.02080
1.200	4.000	.15270	-.07250	.01190	-.00860	.00540	.06950	.01910
1.200	6.000	.23260	-.13390	.01040	-.00740	.00530	.06720	.01730
1.200	8.000	.28660	-.17360	.00930	-.00650	.00490	.06380	.01480
1.200	10.000	.31590	-.19690	.00820	-.00570	.00370	.06450	.01000
	GRADIENT	.04190	-.03251	-.00015	.00027	.00022	.00069	-.00094

RUN NO. 1198/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.16770	.17180	.00980	-.00880	.00270	.06440	.02530
1.463	-4.000	-.13550	.14710	.01030	-.00900	.00270	.06510	.02510
1.463	-2.000	-.06490	.09290	.01050	-.00880	.00310	.06600	.02500
1.463	.000	.01070	.03570	.01030	-.00810	.00330	.06720	.02470
1.463	2.000	.08060	-.01730	.00980	-.00730	.00360	.06850	.02390
1.463	4.000	.14590	-.06800	.00850	-.00610	.00330	.06980	.02280
1.463	6.000	.20810	-.11600	.00880	-.00590	.00350	.07240	.01970
1.463	8.000	.27020	-.16260	.00830	-.00520	.00350	.07450	.01740
1.463	10.000	.31700	-.19670	.00760	-.00430	.00330	.07630	.01600
	GRADIENT	.03528	-.02693	-.00014	.00030	.00009	.00059	-.00026

RUN NO. 1199/ 0 RN/L = 6.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.955	-5.000	-.09100	.10530	.01260	-.01050	.00380	.07590	.01720
1.955	-4.000	-.06280	.08380	.01270	-.01020	.00390	.07530	.01730
1.955	-2.000	-.00380	.03770	.01170	-.00900	.00380	.07430	.01720
1.955	.000	.05240	-.00660	.01060	-.00790	.00370	.07340	.01630
1.955	2.000	.10810	-.05030	.00960	-.00680	.00340	.07240	.01520
1.955	4.000	.16010	-.08950	.01010	-.00700	.00340	.07300	.01420
1.955	6.000	.21130	-.12570	.01230	-.00870	.00440	.07670	.01210
1.955	8.000	.25890	-.15850	.01480	-.01080	.00530	.07850	.01100
1.955	10.000	.27980	-.17370	.01770	-.01300	.00590	.07800	.01070
	GRADIENT	.02805	-.02184	-.00035	.00044	-.00006	-.00037	-.00035

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1) (R72025) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1280/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.03730	.03440	.00590	-.00510	-.00030	.07820	.00080
4.960	-4.000	-.02870	.02900	.00740	-.00570	.00060	.07540	.00100
4.960	-2.000	-.01350	.01860	.00940	-.00630	.00210	.07000	.00110
4.960	.000	-.00210	.01010	.01000	-.00630	.00280	.06490	.00120
4.960	2.000	.00320	.00500	.00920	-.00580	.00250	.06030	.00120
4.960	4.000	.01010	-.00350	.00860	-.00530	.00230	.05490	.00050
4.960	6.000	.02280	-.01630	.00940	-.00550	.00270	.04910	.00040
4.960	8.000	.03320	-.02350	.01100	-.00650	.00410	.04780	-.00020
4.960	10.000	.03730	-.02730	.01130	-.00680	.00440	.04240	-.00020
	GRADIENT	.00523	-.00413	.00028	-.00001	.00029	-.00256	-.00002

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72026) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1089/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.26990	.21120	.01390	-.01250	.00340	.03770	.00610
.600	-4.000	-.24090	.18830	.01310	-.01220	.00310	.03960	.00420
.600	-2.000	-.17420	.14020	.01550	-.01350	.00410	.04120	.00400
.600	.000	-.10900	.09480	.01440	-.01250	.00380	.04130	.00390
.600	2.000	-.03980	.04620	.01570	-.01280	.00460	.04270	.00140
.600	4.000	.02930	-.00300	.01410	-.01130	.00460	.04130	.00050
.600	6.000	.09170	-.04910	.01370	-.01080	.00480	.03900	-.00090
.600	8.000	.15220	-.09530	.01470	-.01140	.00490	.03640	-.00310
.600	10.000	.21450	-.14320	.01440	-.01130	.00560	.03500	-.00500
	GRADIENT	.03334	-.02374	.00012	.00008	.00016	.00040	-.00055

RUN NO. 1090/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.27740	.22380	.01720	-.01570	.00440	.03900	.01880
.901	-4.000	-.24560	.20010	.01760	-.01570	.00430	.04000	.01680
.901	-2.000	-.18410	.15460	.01560	-.01390	.00360	.03890	.01710
.901	.000	-.12150	.11010	.01680	-.01420	.00440	.03980	.01620
.901	2.000	-.05310	.06190	.01740	-.01450	.00510	.04040	.01370
.901	4.000	.01340	.01540	.01780	-.01410	.00530	.03840	.01220
.901	6.000	.08590	-.03740	.01880	-.01410	.00600	.03790	.00770
.901	8.000	.16540	-.09660	.01990	-.01470	.00670	.03840	.00220
.901	10.000	.23100	-.14900	.02310	-.01710	.00820	.04630	-.00730
	GRADIENT	.03224	-.02310	.00006	.00017	.00012	-.00002	-.00066

RUN NO. 1091/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.31550	.26620	.01920	-.01680	.00450	.05370	.02280
.999	-4.000	-.28010	.24690	.01900	-.01650	.00540	.05360	.02150
.999	-2.000	-.22510	.20280	.01770	-.01510	.00440	.05620	.02090
.999	.000	-.15170	.14870	.01790	-.01510	.00490	.05440	.02040
.999	2.000	-.06540	.08430	.01960	-.01630	.00540	.05180	.01800
.999	4.000	.01830	.02190	.02110	-.01700	.00610	.04840	.01570
.999	6.000	.10760	-.04580	.02250	-.01770	.00650	.04520	.01210
.999	8.000	.18050	-.10220	.02070	-.01620	.00640	.04670	.00690
.999	10.000	.23740	-.15070	.01730	-.01350	.00670	.05340	.00000
	GRADIENT	.03725	-.02727	.00019	-.00002	.00013	-.00054	-.00072

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72026) (22 FEB 73)

REFERENCE DATA

SREF = 5220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1092/ 0 RN/L = 6.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.29240	.27180	.01230	-.01070	.00200	.07050	.02700
1.199	-4.000	-.25130	.23940	.01230	-.01070	.00250	.06940	.02730
1.199	-2.000	-.17320	.17880	.01230	-.01050	.00300	.06740	.02770
1.199	.000	-.09320	.11720	.01240	-.01000	.00360	.06670	.02690
1.199	2.000	-.00780	.05010	.01220	-.00930	.00440	.06890	.02340
1.199	4.000	.08190	-.02020	.01130	-.00840	.00470	.06670	.02210
1.199	6.000	.16360	-.08480	.01060	-.00750	.00500	.06380	.02000
1.199	8.000	.22800	-.13300	.00960	-.00650	.00490	.06020	.01710
1.199	10.000	.26340	-.16090	.00820	-.00560	.00410	.05990	.01210
	GRADIENT	.04130	-.03217	-.00008	.00025	.00030	-.00031	-.00059

RUN NO. 1187/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.22940	.21810	.01050	-.00920	.00290	.06450	.02790
1.463	-4.000	-.19750	.19370	.00980	-.00860	.00280	.06440	.02830
1.463	-2.000	-.13270	.14400	.00950	-.00840	.00270	.06390	.02950
1.463	.000	-.06640	.09340	.01060	-.00870	.00360	.06610	.02820
1.463	2.000	.01180	.03290	.01000	-.00750	.00380	.06500	.02820
1.463	4.000	.07250	-.01480	.01020	-.00770	.00350	.06510	.02630
1.463	6.000	.13780	-.06440	.00990	-.00700	.00360	.06620	.02330
1.463	8.000	.20140	-.11250	.00850	-.00570	.00330	.06870	.02010
1.463	10.000	.25100	-.14970	.00720	-.00450	.00300	.07140	.01810
	GRADIENT	.03394	-.02615	.00001	.00016	.00011	.00011	-.00016

RUN NO. 1202/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.958	-5.000	-.13460	.13420	.02200	-.02010	.00730	.07400	.01660
1.958	-4.000	-.10860	.11560	.02150	-.01850	.00710	.07380	.01710
1.958	-2.000	-.05720	.07610	.01840	-.01510	.00610	.07200	.01740
1.958	.000	.00640	.02660	.01510	-.01210	.00520	.07090	.01650
1.958	2.000	.06120	-.01690	.01270	-.00940	.00440	.06860	.01580
1.958	4.000	.11400	-.05830	.01160	-.00800	.00390	.06740	.01530
1.958	6.000	.16410	-.09360	.01270	-.00890	.00430	.07140	.01280
1.958	8.000	.21610	-.12880	.01480	-.01050	.00520	.07350	.01210
1.958	10.000	.24120	-.14720	.01870	-.01360	.00630	.07300	.01230
	GRADIENT	.02801	-.02172	-.00126	.00139	-.00040	-.00077	-.00018

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72026) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1202/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04710	.04190	.00520	-.00460	-.00010	.08270	.00060
4.960	-4.000	-.04440	.03990	.00620	-.00500	.00040	.07840	.00090
4.960	-2.000	-.03540	.03340	.00870	-.00590	.00170	.07110	.00120
4.960	.000	-.02600	.02580	.01000	-.00630	.00240	.06490	.00130
4.960	2.000	-.02100	.01960	.00870	-.00560	.00190	.05930	.00120
4.960	4.000	-.00850	.00770	.00800	-.00490	.00210	.05290	.00100
4.960	6.000	.01040	-.00760	.01070	-.00600	.00310	.04960	.00040
4.960	8.000	.01600	-.01270	.01080	-.00580	.00370	.04670	.00010
4.960	10.000	.02180	-.01870	.00930	-.00530	.00330	.03950	.00030
	GRADIENT	.00421	-.00371	.00033	-.00005	.00024	-.00326	.00004

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72027) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1088/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.15040	.12820	.01270	-.01120	.00270	.03510	.00440
.600	-4.000	-.12000	.10610	.01250	-.01120	.00350	.03760	.00300
.600	-2.000	-.05480	.06080	.01380	-.01170	.00440	.04070	.00270
.600	.000	.00000	.02260	.01420	-.01180	.00450	.04230	.00220
.600	2.000	.07480	-.03060	.01290	-.01050	.00460	.04380	.00070
.600	4.000	.14220	-.07860	.01080	-.00870	.00440	.04360	-.00040
.600	6.000	.20900	-.12710	.01050	-.00820	.00450	.04290	-.00220
.600	8.000	.27910	-.17790	.01080	-.00840	.00520	.04420	-.00430
.600	10.000	.33710	-.22080	.00980	-.00770	.00560	.04660	-.00590
	GRADIENT	.03238	-.02283	-.00013	.00023	.00017	.00094	-.00048

RUN NO. 1087/ 0 RN/L = 6.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.16170	.14880	.00150	-.00270	.00010	.02680	.03010
.901	-4.000	-.12990	.12510	.00350	-.00420	.00060	.02940	.02740
.901	-2.000	-.06100	.07580	.00650	-.00620	.00180	.03120	.02620
.901	.000	-.00110	.03330	.01090	-.00950	.00300	.03410	.02300
.901	2.000	.07600	-.02180	.00940	-.00810	.00330	.03610	.01950
.901	4.000	.15240	-.07730	.01150	-.00940	.00400	.03780	.01530
.901	6.000	.22740	-.13120	.01280	-.01000	.00470	.04110	.01240
.901	8.000	.28620	-.17470	.01270	-.01000	.00500	.04710	.00850
.901	10.000	.33330	-.21150	.01180	-.00920	.00550	.05260	.00570
	GRADIENT	.03464	-.02486	.00109	-.00073	.00044	.00119	-.00155

RUN NO. 1086/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.19140	.17960	.01730	-.01510	.00410	.04050	.02300
.999	-4.000	-.15700	.15390	.01800	-.01570	.00450	.04140	.02200
.999	-2.000	-.08360	.10230	.01780	-.01520	.00480	.04430	.02160
.999	.000	-.00560	.04620	.01860	-.01560	.00570	.04550	.01980
.999	2.000	.07910	-.01570	.01760	-.01420	.00600	.04520	.01840
.999	4.000	.17030	-.08430	.01590	-.01260	.00580	.04560	.01580
.999	6.000	.24170	-.13730	.01610	-.01270	.00600	.05050	.01360
.999	8.000	.29910	-.18110	.01470	-.01150	.00670	.05610	.01030
.999	10.000	.34860	-.22080	.01260	-.00990	.00710	.06260	.00830
	GRADIENT	.04002	-.02907	-.00013	.00027	.00021	.00057	-.00075

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72027) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1085/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.14720	.16560	.01160	-.00980	.00360	.05970	.03350
1.197	-4.000	-.10980	.13630	.01170	-.01000	.00410	.06110	.03230
1.197	-2.000	-.02720	.07240	.01200	-.00990	.00460	.06470	.02960
1.197	.000	.06000	.00540	.01160	-.00920	.00510	.06800	.02780
1.197	2.000	.15380	-.06620	.01110	-.00830	.00510	.07180	.02650
1.197	4.000	.24140	-.13260	.01050	-.00740	.00540	.07480	.02470
1.197	6.000	.30540	-.18040	.00950	-.00650	.00580	.07570	.02200
1.197	8.000	.35350	-.21480	.00770	-.00510	.00560	.07580	.01930
1.197	10.000	.38290	-.23620	.00640	-.00410	.00480	.07780	.01700
	GRADIENT	.04348	-.03337	-.00012	.00028	.00019	.00171	-.00097

RUN NO. 1186/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.08930	.11290	.00840	-.00750	.00210	.06370	.02490
1.460	-4.000	-.05550	.08770	.00920	-.00790	.00260	.06430	.02500
1.460	-2.000	.01710	.03290	.00860	-.00710	.00290	.06660	.02420
1.460	.000	.09150	-.02280	.00860	-.00690	.00280	.06910	.02350
1.460	2.000	.16230	-.07530	.00800	-.00580	.00310	.07190	.02230
1.460	4.000	.22630	-.12420	.00820	-.00550	.00370	.07340	.02190
1.460	6.000	.29090	-.17340	.00760	-.00480	.00370	.07610	.02030
1.460	8.000	.34710	-.21500	.00700	-.00400	.00390	.07950	.01820
1.460	10.000	.37960	-.23780	.00660	-.00340	.00410	.08160	.01670
	GRADIENT	.03547	-.02662	-.00008	.00026	.00014	.00114	-.00037

RUN NO. 1203/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.963	-5.000	-.02310	.05760	.00760	-.00460	.00200	.07910	.01740
1.963	-4.000	.00850	.03160	.00720	-.00450	.00210	.07810	.01710
1.963	-2.000	.06810	-.01580	.00760	-.00480	.00250	.07780	.01640
1.963	.000	.12400	-.06020	.00820	-.00520	.00290	.07680	.01580
1.963	2.000	.17860	-.10330	.00790	-.00490	.00260	.07680	.01420
1.963	4.000	.23070	-.14100	.00810	-.00520	.00280	.07920	.01310
1.963	6.000	.28050	-.17580	.00950	-.00640	.00330	.08160	.01240
1.963	8.000	.32180	-.20350	.01060	-.00730	.00340	.08450	.01080
1.963	10.000	.33140	-.21040	.01000	-.00630	.00300	.08300	.01070
	GRADIENT	.02818	-.02213	.00008	-.00007	.00009	-.00005	-.00048

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72027) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1278/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	.00030	.00720	.00490	-.00150	-.00110	.07450	.00040
4.960	-4.000	.00890	.00150	.00620	-.00300	-.00010	.07230	.00070
4.960	-2.000	.02220	-.00750	.00760	-.00480	.00130	.06770	.00090
4.960	.000	.03090	-.01350	.00800	-.00530	.00230	.06360	.00100
4.960	2.000	.03610	-.01620	.00830	-.00470	.00270	.06070	.00090
4.960	4.000	.04160	-.02210	.00740	-.00420	.00260	.05650	.00050
4.960	6.000	.05770	-.03660	.00830	-.00460	.00310	.05230	.00010
4.960	8.000	.05780	-.04020	.00810	-.00490	.00320	.04710	-.00040
4.960	10.000	.05750	-.04200	.00750	-.00460	.00300	.04200	-.00050
	GRADIENT	.00450	-.00312	.00028	-.00027	.00042	-.00198	.00001

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72028) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2320/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.670	-.05620	.05950	.10770	-.07420	.03570	.01870	.02420
.598	-3.630	-.05780	.06210	.07070	-.04980	.02460	.02130	.02310
.598	-1.560	-.05610	.06280	.03580	-.02580	.01370	.02250	.02290
.598	.490	-.05950	.06520	-.00380	.00130	.00120	.02200	.02290
.598	2.560	-.06000	.06550	-.03960	.02620	-.00970	.02340	.02190
.598	4.600	-.05990	.06420	-.07590	.05170	-.02090	.02120	.02250
.598	6.620	-.06080	.06280	-.11180	.07560	-.03170	.01920	.02220
.598	.490	-.05430	.06180	-.00340	.00090	.00120	.02230	.02260
	GRADIENT	-.00039	.00034	-.01791	.01239	-.00556	.00003	-.00011

RUN NO. 2319/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.800	-.04260	.05770	.12120	-.08400	.04090	.02350	.03120
.901	-3.740	-.03940	.05730	.08320	-.05860	.02900	.02500	.03040
.901	-1.610	-.03950	.05920	.03940	-.02770	.01460	.02760	.02950
.901	.480	-.04170	.06080	-.00140	.00070	.00080	.02710	.02880
.901	2.590	-.04090	.05920	-.04320	.03010	-.01260	.02480	.02970
.901	4.680	-.04180	.05900	-.08400	.05920	-.02620	.02320	.03090
.901	6.760	-.04230	.05830	-.12290	.08550	-.03870	.02020	.03270
.901	.480	-.03890	.05900	-.00020	.00000	.00150	.02680	.02880
	GRADIENT	-.00029	.00016	-.01982	.01395	-.00654	-.00030	.00006

RUN NO. 2317/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.820	-.06230	.00610	.12040	-.08390	.04490	.04330	.03050
.999	-3.750	-.06600	.09270	.07660	-.05340	.02950	.04620	.03100
.999	-1.610	-.06700	.09550	.03510	-.02430	.01420	.04690	.03170
.999	.490	-.07000	.09790	-.00560	.00370	-.00030	.04600	.03120
.999	2.610	-.06770	.09450	-.04400	.03040	-.01500	.04310	.03140
.999	4.720	-.06610	.09250	-.08780	.06130	-.03160	.04140	.03350
.999	6.790	-.05190	.07630	-.12750	.08810	-.04430	.03490	.03140
.999	.490	-.06380	.09170	-.00420	.00240	.00000	.04170	.03150
	GRADIENT	-.00004	-.00007	-.01928	.01343	-.00715	-.00063	.00022

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72028) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 2.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2318/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.195	-5.890	-.00830	.05390	.11200	-.07240	.04670	.06200	.03100
1.195	-3.790	-.01590	.06260	.07030	-.04540	.03010	.06390	.03030
1.195	-1.600	-.00900	.05880	.03260	-.02150	.01450	.06380	.03090
1.195	.500	-.01340	.06280	-.00470	.00240	-.00090	.06290	.03170
1.195	2.640	-.00430	.05480	-.04010	.02480	-.01600	.06260	.03240
1.195	4.770	.00360	.04610	-.07890	.04960	-.03260	.06050	.03200
1.195	6.870	.00920	.03930	-.11860	.07510	-.04830	.05730	.03380
1.195	.500	-.00510	.05570	-.00260	.00010	-.00070	.06330	.03190
	GRADIENT	.00205	-.00173	-.01737	.01106	-.00730	-.00037	.00023

RUN NO. 2311/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.458	-5.950	.02890	.02270	.12050	-.07870	.04680	.06530	.03010
1.458	-3.790	.03530	.02040	.07600	-.04980	.03120	.06630	.02950
1.458	-1.610	.03660	.02130	.03200	-.02070	.01420	.06620	.02940
1.458	.500	.03890	.02020	-.00790	.00510	-.00170	.06520	.02970
1.458	2.660	.04160	.01750	-.04940	.03270	-.01800	.06320	.03140
1.458	4.810	.04510	.01310	-.09300	.06160	-.03440	.06180	.03240
1.458	6.970	.04470	.01020	-.13750	.08990	-.04950	.06090	.03290
1.458	.480	.04100	.01860	-.00740	.00440	-.00170	.06530	.02940
	GRADIENT	.00115	-.00086	-.01953	.01287	-.00761	-.00056	.00036

RUN NO. 2301/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.959	-5.960	.06150	-.01380	.12270	-.08030	.04070	.06630	.02240
1.959	-3.810	.07360	-.02180	.07990	-.05310	.02690	.06580	.02180
1.959	-1.620	.08160	-.02730	.03510	-.02300	.01220	.06500	.02280
1.959	.510	.08680	-.03120	-.00660	.00480	-.00160	.06470	.02310
1.959	2.660	.08170	-.02670	-.04920	.03320	-.01600	.06660	.02250
1.959	4.820	.07670	-.02320	-.09340	.06210	-.03070	.06640	.02260
1.959	7.000	.07030	-.02020	-.13750	.08930	-.04490	.06480	.02320
1.959	.500	.08500	-.03110	-.00930	.00650	-.00260	.06400	.02290
	GRADIENT	.00029	-.00010	-.02001	.01331	-.00666	.00013	.00006

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1) (R72028) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	2.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2296/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.600	-.00250	.00600	.06330	-.03620	.01820	.06010	.00290
4.960	-3.590	-.00350	.00710	.04180	-.02340	.01190	.05970	.00320
4.960	-1.550	.00120	.00570	.01970	-.01040	.00580	.05920	.00320
4.960	.480	.00320	.00490	-.00120	.00050	-.00010	.05950	.00310
4.960	2.530	.00430	.00330	-.02210	.01230	-.00650	.05910	.00330
4.960	4.550	-.00090	.00580	-.04300	.02470	-.01220	.05890	.00330
4.960	6.560	.00480	.00090	-.06450	.03750	-.01890	.05730	.00330
4.960	.480	.00550	.00370	-.00230	.00090	-.00110	.05880	.00340
	GRADIENT	.00041	-.00025	-.01038	.00584	-.00297	-.00008	.00001

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72029) (22 FEB 73)

REFERENCE DATA

SREF = 5220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1017/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.21730	.17090	.01460	-.01320	.00460	.03650	.00440
.602	-4.000	-.18540	.14770	.01390	-.01290	.00370	.03670	.00560
.602	-2.000	-.12110	.10200	.01030	-.01000	.00300	.03920	.00500
.602	.000	-.05380	.05530	.01300	-.01150	.00430	.03920	.00520
.602	2.000	.01580	.00630	.01200	-.01060	.00360	.03800	.00620
.602	4.000	.08690	-.04500	.00920	-.00810	.00340	.03810	.00360
.602	6.000	.16830	-.10440	.01070	-.00880	.00440	.03920	-.00070
.602	8.000	.23200	-.15260	.01070	-.00860	.00520	.03780	-.00320
.602	10.000	.29810	-.20170	.01040	-.00820	.00590	.03620	-.00430
	GRADIENT	.03376	-.02387	-.00045	.00047	-.00007	.00017	-.00004

RUN NO. 1016/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.21330	.17840	.01330	-.01240	.00280	.03160	.02200
.900	-4.000	-.18410	.15670	.01610	-.01410	.00350	.03320	.02110
.900	-2.000	-.11430	.10650	.01550	-.01330	.00380	.03450	.02010
.900	.000	-.04790	.05950	.01450	-.01240	.00390	.03480	.01950
.900	2.000	.01540	.01470	.01510	-.01240	.00440	.03420	.01850
.900	4.000	.07830	-.02960	.01450	-.01160	.00460	.03240	.01710
.900	6.000	.15370	-.08430	.01330	-.01040	.00480	.03010	.01550
.900	8.000	.22090	-.13360	.01280	-.00980	.00510	.02880	.01400
.900	10.000	.27750	-.17620	.01240	-.00930	.00530	.02860	.01310
	GRADIENT	.03267	-.02327	.00001	.00017	.00018	.00009	-.00050

RUN NO. 1014/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.23860	.20770	.01570	-.01400	.00400	.04950	.01650
.999	-4.000	-.20490	.18220	.01400	-.01270	.00280	.04950	.01600
.999	-2.000	-.14010	.13680	.01360	-.01180	.00320	.04960	.01680
.999	.000	-.06710	.08470	.01400	-.01180	.00340	.04750	.01740
.999	2.000	.00180	.03520	.01350	-.01140	.00370	.04230	.01890
.999	4.000	.07870	-.02140	.01440	-.01170	.00450	.03730	.01850
.999	6.000	.15750	-.08170	.01420	-.01130	.00480	.03170	.01770
.999	8.000	.22700	-.13520	.01330	-.01050	.00510	.03130	.02080
.999	10.000	.27950	-.17620	.01270	-.00970	.00540	.03150	.01970
	GRADIENT	.03511	-.02523	-.00010	.00022	.00010	-.00133	.00030

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72029) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1015/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.21580	.21250	.01110	-.00970	.00230	.07020	.03040
1.198	-4.000	-.17650	.18220	.01000	-.00890	.00220	.07090	.03030
1.198	-2.000	-.09400	.11780	.01160	-.00960	.00370	.07140	.02870
1.198	.000	.00060	.04470	.01060	-.00840	.00410	.07080	.02830
1.198	2.000	.08450	-.01910	.00960	-.00740	.00470	.07080	.02780
1.198	4.000	.16240	-.07850	.00930	-.00680	.00470	.07110	.02640
1.198	6.000	.23600	-.13420	.00850	-.00590	.00460	.07010	.02570
1.198	8.000	.27580	-.16500	.00800	-.00580	.00480	.07050	.02470
1.198	10.000	.30240	-.18680	.00710	-.00510	.00470	.06990	.02330
	GRADIENT	.04262	-.03281	-.00017	.00031	.00031	.00005	-.00043

RUN NO. 1168/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.15940	.15950	.00680	-.00610	.00110	.06930	.02140
1.462	-4.000	-.12240	.13130	.00750	-.00650	.00130	.06990	.02080
1.462	-2.000	-.05370	.07790	.00810	-.00690	.00200	.06910	.02170
1.462	.000	.01950	.02260	.00810	-.00640	.00280	.06900	.02220
1.462	2.000	.08630	-.02840	.00760	-.00610	.00270	.06920	.02200
1.462	4.000	.15370	-.07720	.00690	-.00500	.00330	.06950	.02210
1.462	6.000	.21000	-.11940	.00660	-.00440	.00330	.06930	.02310
1.462	8.000	.25280	-.15190	.00580	-.00370	.00350	.07010	.02270
1.462	10.000	.28580	-.17690	.00620	-.00370	.00380	.06960	.02170
	GRADIENT	.03482	-.02640	.00000	.00012	.00024	-.00002	.00012

RUN NO. 1233/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.956	-5.000	-.10100	.10940	.01220	-.00920	.00340	.07270	.01590
1.956	-4.000	-.07300	.08740	.01250	-.00910	.00350	.06970	.01660
1.956	-2.000	-.01820	.04520	.01280	-.00930	.00370	.06690	.01750
1.956	.000	.03840	.00110	.01270	-.00910	.00390	.06420	.01780
1.956	2.000	.09150	-.03940	.01170	-.00810	.00370	.06270	.01660
1.956	4.000	.14370	-.07690	.01200	-.00840	.00390	.06390	.01610
1.956	6.000	.19490	-.11460	.01220	-.00870	.00420	.06570	.01540
1.956	8.000	.23680	-.14610	.01230	-.00850	.00400	.06650	.01490
1.956	10.000	.24040	-.14890	.01370	-.00960	.00440	.06330	.01560
	GRADIENT	.02727	-.02084	-.00006	.00011	.00005	-.00101	-.00000

MSFC 545 (1A1) MOD ATP LV-(01)/(T3)/(S1) (R72029) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1236/ 0 RN/L = 4.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04620	.04230	.01970	-.00810	.00420	.08180	.00090
4.960	-4.000	-.04270	.04010	.01540	-.00680	.00330	.07730	.00100
4.960	-2.000	-.03230	.03310	.00970	-.00500	.00230	.06970	.00100
4.960	.000	-.01930	.02360	.00740	-.00410	.00200	.06400	.00090
4.960	2.000	-.00590	.01300	.00840	-.00440	.00220	.06000	.00090
4.960	4.000	.01290	-.00470	.00610	-.00350	.00160	.05350	.00060
4.960	6.000	.02860	-.02000	.00590	-.00290	.00180	.04830	.00010
4.960	8.000	.03410	-.02440	.00810	-.00380	.00270	.04570	-.00030
4.960	10.000	.03450	-.02670	.00710	-.00370	.00250	.03940	-.00050
	GRADIENT	.00649	-.00506	-.00136	.00047	-.00025	-.00304	-.00003

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72030) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1028/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.27930	.21620	.01550	-.01410	.00460	.03690	.00590
.601	-4.000	-.24660	.19100	.01290	-.01200	.00350	.03820	.00550
.601	-2.000	-.17620	.13970	.01180	-.01060	.00380	.04180	.00350
.601	.000	-.11340	.09560	.01010	-.00950	.00380	.04130	.00380
.601	2.000	-.03920	.04380	.00770	-.00720	.00280	.03950	.00430
.601	4.000	.03540	-.00990	.00790	-.00670	.00330	.03950	.00230
.601	6.000	.10510	-.06140	.00640	-.00540	.00300	.03780	.00000
.601	8.000	.16310	-.10580	.00670	-.00520	.00370	.03520	-.00200
.601	10.000	.22340	-.15190	.00650	-.00460	.00460	.03230	-.00280
	GRADIENT	.03478	-.02487	-.00083	.00080	-.00013	.00023	-.00032

RUN NO. 1029/ 0 RN/L = 6.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.28280	.22750	.01180	-.01090	.00270	.04080	.02090
.903	-4.000	-.25140	.20410	.01200	-.01080	.00250	.04200	.01830
.903	-2.000	-.17870	.15010	.01060	-.00920	.00220	.04190	.01700
.903	.000	-.11240	.10340	.00940	-.00800	.00260	.04310	.01560
.903	2.000	-.04970	.05930	.00900	-.00710	.00260	.04270	.01470
.903	4.000	.01680	.01190	.00720	-.00540	.00250	.04030	.01400
.903	6.000	.08340	-.03670	.00660	-.00460	.00300	.03770	.01160
.903	8.000	.15380	-.08940	.00710	-.00480	.00420	.03370	.01040
.903	10.000	.21490	-.13570	.00780	-.00510	.00480	.03150	.00950
	GRADIENT	.03336	-.02396	-.00052	.00062	-.00000	-.00000	-.00070

RUN NO. 1030/ 0 RN/L = 8.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.30200	.25280	.00950	-.00860	.00220	.05760	.01610
1.000	-4.000	-.27440	.23220	.01000	-.00910	.00230	.05700	.01490
1.000	-2.000	-.20880	.18580	.00990	-.00860	.00190	.05640	.01540
1.000	.000	-.13750	.13430	.01060	-.00860	.00260	.05350	.01620
1.000	2.000	-.06510	.08150	.01040	-.00820	.00260	.04980	.01600
1.000	4.000	.00870	.02670	.01010	-.00760	.00300	.04490	.01500
1.000	6.000	.08740	-.03450	.00900	-.00650	.00380	.03930	.01350
1.000	8.000	.16010	-.09150	.00880	-.00620	.00450	.03530	.01090
1.000	10.000	.22360	-.14190	.00720	-.00480	.00470	.03480	.01010
	GRADIENT	.03475	-.02521	.00007	.00012	.00009	-.00137	-.00001

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72030) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1031/ 0 RN/L = 6.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.28000	.26010	.00570	-.00560	.00160	.07840	.02700
1.199	-4.000	-.24060	.22930	.00740	-.00680	.00220	.07790	.02650
1.199	-2.000	-.15370	.16090	.00930	-.00770	.00340	.07630	.02510
1.199	.000	-.07160	.09630	.00920	-.00730	.00340	.07510	.02370
1.199	2.000	.01770	.02750	.00850	-.00660	.00360	.07530	.02190
1.199	4.000	.09740	-.03390	.00750	-.00550	.00430	.07370	.02100
1.199	6.000	.16730	-.08820	.00640	-.00450	.00450	.07180	.02060
1.199	8.000	.21570	-.12650	.00570	-.00370	.00460	.06960	.02010
1.199	10.000	.24850	-.15290	.00560	-.00350	.00490	.06690	.01960
	GRADIENT	.04223	-.03293	.00016	.00004	.00027	-.00050	-.00070

RUN NO. 1169/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.21920	.20450	.00860	-.00780	.00180	.07200	.02180
1.461	-4.000	-.18490	.17850	.00780	-.00660	.00180	.07270	.02110
1.461	-2.000	-.10990	.11990	.00900	-.00740	.00250	.07100	.02130
1.461	.000	-.03880	.06510	.00850	-.00680	.00290	.07070	.02090
1.461	2.000	.03860	.00520	.00790	-.00690	.00280	.06980	.02040
1.461	4.000	.10030	-.04090	.00650	-.00520	.00280	.06720	.02160
1.461	6.000	.15880	-.08490	.00630	-.00440	.00300	.06710	.02140
1.461	8.000	.20090	-.11700	.00640	-.00410	.00360	.06660	.02130
1.461	10.000	.23360	-.14210	.00650	-.00400	.00390	.06500	.02100
	GRADIENT	.03598	-.02771	-.00017	.00019	.00013	-.00052	-.00005

RUN NO. 1232/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.953	-5.000	-.15360	.14850	.01400	-.01020	.00410	.07390	.01610
1.953	-4.000	-.12350	.12400	.01340	-.00990	.00390	.07150	.01570
1.953	-2.000	-.07530	.08670	.01360	-.01030	.00380	.06720	.01630
1.953	.000	-.01710	.04160	.01300	-.01000	.00400	.06470	.01670
1.953	2.000	.03960	-.00160	.01200	-.00880	.00380	.06130	.01640
1.953	4.000	.09220	-.04030	.01230	-.00900	.00390	.06190	.01520
1.953	6.000	.14140	-.07700	.01260	-.00900	.00430	.06220	.01500
1.953	8.000	.18320	-.10880	.01300	-.00920	.00400	.06190	.01500
1.953	10.000	.19090	-.11530	.01410	-.01000	.00430	.05810	.01600
	GRADIENT	.02733	-.02100	-.00020	.00015	-.00002	-.00141	-.00003

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72030) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1237/ 0 RN/L = 4.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.03260	.03650	.00780	-.00560	.00090	.07560	.00100
4.960	-4.000	-.03820	.03920	.00940	-.00610	.00170	.07330	.00110
4.960	-2.000	-.04150	.03950	.01050	-.00630	.00250	.06770	.00130
4.960	.000	-.03500	.03290	.01000	-.00590	.00260	.06170	.00130
4.960	2.000	-.01850	.01870	.00840	-.00480	.00220	.05540	.00140
4.960	4.000	-.00350	.00480	.00780	-.00420	.00190	.05150	.00100
4.960	6.000	.01500	-.01090	.00930	-.00460	.00270	.04810	.00050
4.960	8.000	.02090	-.01730	.00720	-.00350	.00230	.04140	.00020
4.960	10.000	.02360	-.02100	.00600	-.00320	.00220	.03380	.00050
	GRADIENT	.00340	-.00360	-.00008	.00018	.00009	-.00277	.00001

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72031) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1063/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.596	-5.000	-.15060	.12430	.00580	-.00790	.00180	.03310	.00470
.596	-4.000	-.11490	.09960	.00890	-.00890	.00230	.03660	.00260
.596	-2.000	-.04490	.05150	.00810	-.00840	.00400	.04150	.00130
.596	.000	.02280	.00390	.01190	-.01060	.00470	.04150	.00230
.596	2.000	.08210	-.03680	.01120	-.00950	.00420	.03970	.00320
.596	4.000	.14740	-.08560	.00790	-.00690	.00300	.03940	.00100
.596	6.000	.23360	-.14710	.01080	-.00820	.00520	.04210	-.00240
.596	8.000	.29260	-.19190	.00990	-.00770	.00530	.03760	-.00240
.596	10.000	.34980	-.23410	.00980	-.00790	.00560	.03870	-.00350
	GRADIENT	.03300	-.02315	.00030	.00003	.00018	.00058	-.00022

RUN NO. 1064/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.12580	.11540	.01140	-.01140	.00200	.03210	.01900
.902	-4.000	-.10070	.09710	.01660	-.01450	.00330	.03400	.01860
.902	-2.000	-.03490	.05090	.01580	-.01370	.00350	.03530	.01870
.902	.000	.02730	.00700	.01710	-.01450	.00440	.03450	.01980
.902	2.000	.08810	-.03600	.01430	-.01220	.00430	.03520	.01690
.902	4.000	.15500	-.08360	.01340	-.01090	.00480	.03600	.01430
.902	6.000	.24020	-.14330	.01490	-.01170	.00560	.03610	.01360
.902	8.000	.29520	-.18320	.01470	-.01140	.00540	.03710	.01230
.902	10.000	.34660	-.22140	.01350	-.01040	.00540	.03660	.01140
	GRADIENT	.03132	-.02216	.00002	.00017	.00027	.00033	-.00043

RUN NO. 1065/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.15270	.14560	.01690	-.01480	.00350	.04580	.01690
.997	-4.000	-.12080	.12180	.01520	-.01390	.00310	.04520	.01720
.997	-2.000	-.06140	.08190	.01540	-.01350	.00370	.04930	.01750
.997	.000	.01920	.02440	.01450	-.01270	.00330	.04760	.01720
.997	2.000	.09550	-.03040	.01810	-.01520	.00460	.04500	.01650
.997	4.000	.18210	-.09580	.01870	-.01500	.00500	.04210	.01610
.997	6.000	.26170	-.15550	.01730	-.01370	.00540	.03940	.01670
.997	8.000	.32230	-.20180	.01520	-.01200	.00600	.04460	.01630
.997	10.000	.37450	-.24150	.01530	-.01180	.00680	.04780	.01510
	GRADIENT	.03710	-.02658	.00020	-.00008	.00018	-.00034	-.00011

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72031) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1066/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.11520	.13660	.01080	-.01000	.00230	.07040	.02860
1.198	-4.000	-.07860	.10810	.01010	-.00910	.00220	.07100	.02930
1.198	-2.000	-.00350	.05040	.01130	-.00980	.00360	.07230	.02790
1.198	.000	.08850	-.01930	.01180	-.00970	.00430	.07310	.02800
1.198	2.000	.16920	-.08020	.01150	-.00900	.00540	.07340	.02900
1.198	4.000	.25070	-.14080	.01000	-.00760	.00520	.07770	.02560
1.198	6.000	.31640	-.18860	.00890	-.00630	.00560	.07760	.02430
1.198	8.000	.35090	-.21410	.00770	-.00570	.00540	.07840	.02340
1.198	10.000	.37940	-.23680	.00650	-.00490	.00490	.07860	.02150
	GRADIENT	.04106	-.03114	.00001	.00019	.00038	.00069	-.00025

RUN NO. 1180/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.08310	.10220	.00740	-.00620	.00150	.06930	.01990
1.460	-4.000	-.04260	.07190	.00840	-.00690	.00170	.06890	.02060
1.460	-2.000	.02170	.02460	.00840	-.00650	.00250	.06910	.02150
1.460	.000	.09560	-.03220	.00710	-.00560	.00240	.07080	.02220
1.460	2.000	.16230	-.08170	.00740	-.00560	.00270	.07250	.02230
1.460	4.000	.23700	-.13430	.00700	-.00460	.00360	.07470	.02260
1.460	6.000	.29460	-.17630	.00550	-.00360	.00310	.07660	.02330
1.460	8.000	.33300	-.20440	.00510	-.00290	.00350	.07950	.02260
1.460	10.000	.36070	-.22550	.00640	-.00360	.00400	.08150	.02120
	GRADIENT	.03519	-.02613	-.00011	.00021	.00021	.00062	.00029

RUN NO. 1229/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.955	-5.000	-.02680	.05500	.01180	-.00890	.00340	.07570	.01600
1.955	-4.000	.00260	.03180	.01190	-.00900	.00360	.07360	.01630
1.955	-2.000	.05770	-.01050	.01220	-.00900	.00370	.07220	.01700
1.955	.000	.11480	-.05440	.01080	-.00790	.00370	.07120	.01640
1.955	2.000	.16480	-.09200	.00940	-.00690	.00330	.07040	.01570
1.955	4.000	.21700	-.12870	.01130	-.00800	.00390	.07230	.01500
1.955	6.000	.26710	-.16320	.01250	-.00880	.00440	.07530	.01420
1.955	8.000	.30590	-.19180	.01160	-.00820	.00420	.07770	.01370
1.955	10.000	.30330	-.18980	.01300	-.00960	.00400	.07410	.01490
	GRADIENT	.02708	-.02048	-.00018	.00019	.00002	-.00040	-.00012

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72031) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1240/ 0 RN/L = 4.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.07580	.05840	.02080	-.01610	.00290	.05720	.00040
4.960	-4.000	-.04620	.03920	.01530	-.01170	.00230	.05870	.00010
4.960	-2.000	-.00080	.01010	.00920	-.00550	.00200	.06150	-.00020
4.960	.000	.02180	-.00400	.00710	-.00270	.00230	.06190	-.00030
4.960	2.000	.01480	.00180	.00770	-.00390	.00240	.05820	.00000
4.960	4.000	.02500	-.01090	.00460	-.00230	.00140	.05250	-.00010
4.960	6.000	.03980	-.03000	.00460	-.00220	.00100	.04920	-.00060
4.960	8.000	.04550	-.03310	.00480	-.00200	.00220	.03890	-.00110
4.960	10.000	.03980	-.03190	.00260	-.00130	.00150	.03190	-.00100
	GRADIENT	.01059	-.00707	-.00158	.00142	-.00010	-.00042	-.00004

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72032) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1114/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.24130	.19170	.01520	-.01360	.00460	.03410	.00360
.600	-4.000	-.20450	.16510	.01570	-.01380	.00490	.03550	.00430
.600	-2.000	-.13580	.11650	.01750	-.01480	.00580	.03840	.00340
.600	.000	-.06210	.06510	.01550	-.01330	.00510	.03960	.00240
.600	2.000	.00960	.01460	.01560	-.01310	.00510	.03820	.00270
.600	4.000	.08290	-.03860	.01550	-.01270	.00520	.03950	-.00020
.600	6.000	.15210	-.08890	.01510	-.01200	.00540	.03670	-.00130
.600	8.000	.21980	-.13920	.01470	-.01150	.00560	.03550	-.00380
.600	10.000	.28190	-.18580	.01590	-.01230	.00640	.03480	-.00580
	GRADIENT	.03596	-.02545	-.00002	.00013	.00004	.00054	-.00039

RUN NO. 1113/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.24260	.20060	.01890	-.01620	.00480	.03280	.02210
.902	-4.000	-.20330	.17220	.01900	-.01610	.00500	.03440	.02090
.902	-2.000	-.13540	.12370	.01830	-.01510	.00510	.03570	.02000
.902	.000	-.06750	.07600	.01620	-.01350	.00480	.03610	.01970
.902	2.000	.00490	.02530	.01850	-.01490	.00550	.03630	.01750
.902	4.000	.07250	-.02320	.01770	-.01420	.00580	.03580	.01420
.902	6.000	.14650	-.07690	.01730	-.01350	.00560	.03310	.01250
.902	8.000	.22300	-.13140	.01720	-.01330	.00590	.03260	.01090
.902	10.000	.28680	-.17750	.01720	-.01300	.00640	.03250	.01030
	GRADIENT	.03486	-.02470	-.00014	.00023	.00010	.00031	-.00077

RUN NO. 1111/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.995	-5.000	-.27020	.23420	.01990	-.01700	.00520	.05080	.01890
.995	-4.000	-.23280	.20760	.01940	-.01640	.00510	.05200	.01900
.995	-2.000	-.15700	.15140	.01970	-.01630	.00550	.05120	.01720
.995	.000	-.08280	.09760	.01930	-.01590	.00530	.04830	.01750
.995	2.000	-.00790	.04350	.01910	-.01560	.00540	.04380	.01710
.995	4.000	.07450	-.01770	.01880	-.01490	.00540	.03880	.01590
.995	6.000	.16350	-.08220	.01910	-.01490	.00620	.03830	.01680
.995	8.000	.24560	-.14470	.01910	-.01460	.00630	.03810	.01550
.995	10.000	.30280	-.19140	.01500	-.01160	.00550	.03980	.01250
	GRADIENT	.03805	-.02779	-.00010	.00020	.00003	-.00138	-.00031

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72032) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1112/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.22510	.21960	.01260	-.01020	.00330	.07020	.03030
1.196	-4.000	-.18190	.18640	.01270	-.01030	.00360	.07120	.02920
1.196	-2.000	-.09480	.11870	.01260	-.00980	.00440	.07160	.02810
1.196	.000	-.00990	.05350	.01220	-.00910	.00490	.07220	.02680
1.196	2.000	.07980	-.01450	.01180	-.00900	.00490	.07310	.02540
1.196	4.000	.16450	-.07820	.01110	-.00820	.00490	.07280	.02480
1.196	6.000	.24100	-.13570	.00960	-.00680	.00460	.07250	.02350
1.196	8.000	.29490	-.17630	.00960	-.00670	.00510	.07350	.02210
1.196	10.000	.33320	-.20540	.00950	-.00660	.00520	.07330	.02040
	GRADIENT	.04336	-.03318	-.00017	.00023	.00019	.00029	-.00061

RUN NO. 1193/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.18170	.17810	.00970	-.00800	.00240	.06860	.02320
1.463	-4.000	-.14790	.15220	.00950	-.00770	.00250	.06910	.02280
1.463	-2.000	-.07430	.09580	.00890	-.00720	.00280	.06890	.02260
1.463	.000	.00470	.03650	.00980	-.00760	.00350	.06930	.02250
1.463	2.000	.08230	-.02200	.00950	-.00730	.00360	.07050	.02210
1.463	4.000	.15550	-.07630	.00850	-.00620	.00340	.07160	.02130
1.463	6.000	.22280	-.12670	.00800	-.00530	.00370	.07230	.02060
1.463	8.000	.27470	-.16520	.00730	-.00470	.00370	.07290	.02030
1.463	10.000	.31250	-.19310	.00750	-.00470	.00390	.07360	.01980
	GRADIENT	.03782	-.02855	-.00008	.00015	.00014	.00030	-.00018

RUN NO. 1234/ 0 RN/L = 6.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.953	-5.000	-.10790	.11460	.01360	-.01030	.00380	.07460	.01790
1.953	-4.000	-.08120	.09260	.01370	-.01040	.00390	.07340	.01740
1.953	-2.000	-.02260	.04750	.01380	-.01040	.00420	.07230	.01650
1.953	.000	.03820	.00020	.01300	-.00960	.00420	.07040	.01580
1.953	2.000	.09770	-.04500	.01250	-.00870	.00400	.06790	.01500
1.953	4.000	.15440	-.08610	.01290	-.00910	.00410	.06940	.01350
1.953	6.000	.20990	-.12710	.01260	-.00880	.00450	.07170	.01180
1.953	8.000	.25660	-.16270	.01240	-.00840	.00450	.07290	.01030
1.953	10.000	.27260	-.17400	.01430	-.00990	.00450	.07150	.01070
	GRADIENT	.02939	-.02251	-.00012	.00019	.00003	-.00068	-.00046

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72032) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1235/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04760	.04110	.00490	-.00510	-.00060	.07650	.00060
4.960	-4.000	-.04220	.03920	.00600	-.00520	.00030	.07360	.00070
4.960	-2.000	-.03040	.03310	.00820	-.00530	.00200	.06830	.00100
4.960	.000	-.01910	.02480	.00930	-.00520	.00280	.06330	.00110
4.960	2.000	-.01100	.01540	.00780	-.00470	.00190	.05810	.00100
4.960	4.000	.00990	-.00190	.00670	-.00380	.00190	.05180	.00080
4.960	6.000	.02550	-.01670	.01000	-.00470	.00350	.04890	.00010
4.960	8.000	.02710	-.01960	.00820	-.00410	.00290	.04390	.00010
4.960	10.000	.02790	-.02320	.00440	-.00240	.00180	.03630	.00000
	GRADIENT	.00605	-.00458	.00022	.00013	.00026	-.00269	.00003

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72033) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1107/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.603	-5.000	-.30750	.23920	.02020	-.01730	.00540	.03340	.00870
.603	-4.000	-.26110	.20420	.01690	-.01490	.00520	.03800	.00480
.603	-2.000	-.18400	.14810	.01950	-.01680	.00630	.04060	.00330
.603	.000	-.11530	.09980	.01890	-.01610	.00620	.04150	.00250
.603	2.000	-.04460	.05090	.01900	-.01540	.00590	.04010	.00310
.603	4.000	.03990	-.00950	.01810	-.01430	.00590	.03990	.00070
.603	6.000	.10540	-.05740	.01860	-.01430	.00640	.03830	-.00120
.603	8.000	.17450	-.10870	.01830	-.01390	.00660	.03420	-.00220
.603	10.000	.23360	-.15290	.01820	-.01350	.00710	.02920	-.00200
	GRADIENT	.03770	-.02687	-.00006	.00021	.00007	.00056	-.00067

RUN NO. 1108/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.29990	.24190	.01600	-.01500	.00450	.03820	.02290
.901	-4.000	-.26570	.21730	.02000	-.01720	.00540	.03710	.02290
.901	-2.000	-.19720	.16660	.01820	-.01570	.00490	.03700	.02180
.901	.000	-.12650	.11590	.02050	-.01700	.00560	.03790	.01970
.901	2.000	-.05820	.06750	.01930	-.01590	.00560	.03760	.01790
.901	4.000	.01380	.01650	.01970	-.01610	.00620	.03560	.01570
.901	6.000	.08770	-.03640	.01810	-.01420	.00600	.03200	.01390
.901	8.000	.16660	-.09420	.01750	-.01350	.00620	.02910	.01170
.901	10.000	.23280	-.14260	.01840	-.01410	.00700	.02730	.01030
	GRADIENT	.03481	-.02503	.00026	-.00003	.00015	-.00016	-.00083

RUN NO. 1110/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.32940	.27900	.02050	-.01820	.00570	.05900	.02020
.996	-4.000	-.29740	.25610	.02010	-.01770	.00520	.05930	.02010
.996	-2.000	-.21330	.18800	.01950	-.01660	.00500	.05150	.01720
.996	.000	-.14030	.13570	.02000	-.01650	.00540	.05010	.01750
.996	2.000	-.06430	.08140	.02090	-.01730	.00590	.04790	.01650
.996	4.000	.01340	.02370	.02070	-.01690	.00580	.04330	.01440
.996	6.000	.09810	-.03800	.01980	-.01580	.00630	.03910	.01530
.996	8.000	.18440	-.10390	.01930	-.01520	.00650	.03620	.01240
.996	10.000	.24830	-.15630	.01660	-.01310	.00610	.03630	.01030
	GRADIENT	.03828	-.02851	.00007	.00011	.00005	-.00176	-.00061

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72033) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1109/ 0 RN/L = 6.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.29080	.26840	.01440	-.01180	.00340	.07400	.02950
1.197	-4.000	-.25100	.23730	.01370	-.01090	.00360	.07400	.02920
1.197	-2.000	-.16540	.17020	.01290	-.01010	.00370	.07370	.02690
1.197	.000	-.07260	.09890	.01200	-.00930	.00460	.07450	.02420
1.197	2.000	.01860	.02870	.01180	-.00910	.00490	.07360	.02290
1.197	4.000	.10140	-.03400	.01220	-.00910	.00550	.07330	.02110
1.197	6.000	.17990	-.09410	.01130	-.00810	.00540	.07180	.01980
1.197	8.000	.24280	-.14210	.01040	-.00720	.00550	.06960	.01920
1.197	10.000	.28430	-.17410	.00980	-.00680	.00570	.06760	.01830
	GRADIENT	.04408	-.03401	-.00026	.00030	.00024	-.00006	-.00098

RUN NO. 1192/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.467	-5.000	-.24680	.22700	.01020	-.00850	.00250	.07280	.02330
1.467	-4.000	-.21350	.20140	.01150	-.00930	.00300	.07240	.02280
1.467	-2.000	-.14070	.14510	.00960	-.00760	.00290	.07270	.02110
1.467	.000	-.06150	.08360	.00980	-.00770	.00340	.07090	.02190
1.467	2.000	.01680	.02490	.00960	-.00770	.00340	.06970	.02260
1.467	4.000	.09100	-.03040	.00990	-.00740	.00370	.07010	.02140
1.467	6.000	.15970	-.08260	.00840	-.00600	.00360	.06910	.02130
1.467	8.000	.21920	-.12730	.00720	-.00480	.00350	.06990	.02010
1.467	10.000	.25830	-.15660	.00750	-.00470	.00380	.06980	.01970
	GRADIENT	.03789	-.02892	-.00011	.00016	.00012	-.00036	-.00013

RUN NO. 1231/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.15890	.15390	.01380	-.01040	.00410	.07680	.01800
1.954	-4.000	-.12900	.12980	.01410	-.01060	.00420	.07390	.01790
1.954	-2.000	-.07590	.08930	.01460	-.01100	.00440	.07060	.01810
1.954	.000	-.01500	.04150	.01390	-.01040	.00460	.06810	.01750
1.954	2.000	.04720	-.00660	.01260	-.00940	.00400	.06420	.01650
1.954	4.000	.10440	-.04890	.01270	-.00930	.00420	.06520	.01430
1.954	6.000	.15750	-.08880	.01280	-.00920	.00460	.06640	.01270
1.954	8.000	.20650	-.12640	.01310	-.00920	.00450	.06700	.01130
1.954	10.000	.22300	-.13840	.01540	-.01100	.00450	.06520	.01210
	GRADIENT	.02934	-.02263	-.00017	.00016	-.00000	-.00136	-.00037

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72033) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1230/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04710	.04290	.00540	-.00440	.00020	.07790	.00080
4.960	-4.000	-.05040	.04580	.00700	-.00480	.00100	.07550	.00100
4.960	-2.000	-.04970	.04600	.00880	-.00530	.00200	.07030	.00120
4.960	.000	-.04070	.03890	.00920	-.00520	.00230	.06490	.00130
4.960	2.000	-.02430	.02450	.00760	-.00440	.00180	.05950	.00120
4.960	4.000	-.00150	.00540	.00660	-.00380	.00160	.05180	.00090
4.960	6.000	.00950	-.00660	.00750	-.00370	.00220	.04820	.00040
4.960	8.000	.01690	-.01300	.00740	-.00310	.00250	.04550	.00000
4.960	10.000	.02490	-.02030	.00700	-.00340	.00260	.03850	-.00010
	GRADIENT	.00499	-.00410	.00010	.00007	.00014	-.00284	.00002

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72034) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1070/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.15670	.13010	.01290	-.01200	.00390	.03410	.00320
.598	-4.000	-.12380	.10710	.01390	-.01280	.00430	.03750	.00130
.598	-2.000	-.05680	.06120	.01370	-.01210	.00500	.04080	.00060
.598	.000	.01230	.01300	.01470	-.01240	.00540	.04170	.00120
.598	2.000	.07700	-.03220	.01370	-.01140	.00500	.04090	.00110
.598	4.000	.14900	-.08450	.01250	-.01030	.00460	.04130	-.00120
.598	6.000	.22810	-.14110	.01380	-.01070	.00580	.04190	-.00380
.598	8.000	.29690	-.19140	.01290	-.01020	.00620	.04110	-.00530
.598	10.000	.36050	-.23790	.01320	-.01040	.00670	.04220	-.00690
	GRADIENT	.03386	-.02370	-.00004	.00020	.00009	.00069	-.00033

RUN NO. 1069/ 0 RN/L = 6.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.14600	.13050	.01540	-.01380	.00340	.03150	.01880
.903	-4.000	-.11520	.10870	.01770	-.01510	.00420	.03350	.01790
.903	-2.000	-.04820	.06200	.01760	-.01480	.00440	.03460	.01840
.903	.000	.01900	.01510	.01730	-.01440	.00490	.03500	.01800
.903	2.000	.08540	-.03140	.01670	-.01360	.00510	.03600	.01520
.903	4.000	.15840	-.08370	.01510	-.01210	.00520	.03640	.01240
.903	6.000	.23830	-.13990	.01580	-.01230	.00580	.03790	.01050
.903	8.000	.30330	-.18590	.01570	-.01200	.00580	.04010	.00920
.903	10.000	.36260	-.22890	.01470	-.01110	.00580	.04140	.00860
	GRADIENT	.03374	-.02369	-.00010	.00022	.00018	.00048	-.00063

RUN NO. 1068/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.17650	.16500	.01760	-.01530	.00420	.04480	.01820
1.000	-4.000	-.14210	.14040	.01730	-.01510	.00440	.04590	.01860
1.000	-2.000	-.07550	.09530	.01730	-.01460	.00500	.05020	.01900
1.000	.000	.00480	.03790	.01660	-.01380	.00490	.04790	.01890
1.000	2.000	.08540	-.02040	.01770	-.01460	.00550	.04480	.01730
1.000	4.000	.17330	-.08610	.01820	-.01440	.00560	.04210	.01610
1.000	6.000	.25750	-.14900	.01770	-.01370	.00590	.04210	.01450
1.000	8.000	.33000	-.20350	.01660	-.01270	.00650	.04740	.01390
1.000	10.000	.38780	-.24750	.01550	-.01170	.00670	.05120	.01200
	GRADIENT	.03875	-.02771	.00006	.00010	.00016	-.00033	-.00024

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72034) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 3.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1067/ 0 RN/L = 6.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.12950	.14720	.01200	-.01020	.00330	.06890	.02890
1.199	-4.000	-.08930	.11650	.01180	-.00980	.00350	.07010	.02880
1.199	-2.000	-.00660	.05350	.01230	-.01000	.00460	.07200	.02770
1.199	.000	.08260	-.01400	.01230	-.00950	.00500	.07320	.02750
1.199	2.000	.16760	-.07790	.01140	-.00850	.00550	.07580	.02650
1.199	4.000	.25200	-.14050	.01050	-.00760	.00540	.07930	.02390
1.199	6.000	.32270	-.19150	.00950	-.00650	.00550	.07970	.02290
1.199	8.000	.36900	-.22530	.00840	-.00580	.00550	.08160	.02160
1.199	10.000	.40460	-.25170	.00750	-.00520	.00530	.08240	.01980
	GRADIENT	.04260	-.03216	-.00014	.00027	.00026	.00108	-.00050

RUN NO. 1181/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.09650	.11390	.00950	-.00780	.00240	.06960	.02080
1.462	-4.000	-.05710	.08440	.00960	-.00780	.00250	.07030	.02070
1.462	-2.000	.01350	.03220	.00970	-.00750	.00320	.07080	.02110
1.462	.000	.09030	-.02570	.00910	-.00680	.00330	.07310	.02080
1.462	2.000	.16250	-.07940	.00920	-.00670	.00340	.07540	.02020
1.462	4.000	.24010	-.13530	.00820	-.00550	.00380	.07810	.01940
1.462	6.000	.30600	-.18350	.00730	-.00460	.00360	.08030	.01920
1.462	8.000	.35390	-.21800	.00680	-.00390	.00370	.08280	.01860
1.462	10.000	.38900	-.24350	.00730	-.00420	.00400	.08510	.01760
	GRADIENT	.03720	-.02761	-.00013	.00024	.00015	.00093	-.00014

RUN NO. 1230/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.03520	.05990	.01310	-.01000	.00390	.07730	.01590
1.954	-4.000	-.00640	.03680	.01320	-.01000	.00400	.07580	.01580
1.954	-2.000	.05130	-.00780	.01320	-.00980	.00410	.07530	.01530
1.954	.000	.11010	-.05290	.01210	-.00880	.00410	.07440	.01430
1.954	2.000	.16520	-.09410	.01110	-.00780	.00370	.07390	.01350
1.954	4.000	.22240	-.13490	.01180	-.00820	.00410	.07630	.01240
1.954	6.000	.27890	-.17500	.01250	-.00870	.00450	.07970	.01120
1.954	8.000	.32260	-.20740	.01160	-.00800	.00440	.08140	.01050
1.954	10.000	.32950	-.21170	.01300	-.00910	.00450	.07890	.01130
	GRADIENT	.02863	-.02169	-.00022	.00026	.00000	-.00016	-.00040

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72034) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1239/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04870	.04440	.01580	-.01210	.00220	.06740	.00040
4.960	-4.000	-.03280	.03380	.01280	-.00940	.00210	.06660	.00020
4.960	-2.000	-.00600	.01570	.00930	-.00550	.00210	.06520	.00010
4.960	.000	.01250	.00290	.00770	-.00360	.00230	.06290	.00000
4.960	2.000	.02110	-.00290	.00760	-.00420	.00220	.05900	.00010
4.960	4.000	.03430	-.01450	.00660	-.00350	.00210	.05480	.00000
4.960	6.000	.04780	-.02980	.00610	-.00310	.00200	.05160	-.00030
4.960	8.000	.05760	-.03850	.00560	-.00260	.00240	.04550	-.00090
4.960	10.000	.05520	-.03870	.00510	-.00250	.00240	.03990	-.00110
	GRADIENT	.00904	-.00635	-.00094	.00090	.00000	-.00137	-.00004

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72035) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2337/ 0 RN/L = 5.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.597	-5.690	-.07430	.07190	.10820	-.07470	.03560	.01690	.02400
.597	-3.650	-.06810	.06910	.07050	-.04960	.02400	.01850	.02430
.597	-1.560	-.06400	.06740	.03420	-.02460	.01290	.02210	.02170
.597	.480	-.06250	.06770	.00000	-.00130	.00260	.02250	.02180
.597	2.530	-.06760	.07110	-.03690	.02440	-.00850	.02120	.02190
.597	4.580	-.07580	.07560	-.07330	.04960	-.01970	.02020	.02130
.597	6.630	-.07860	.07650	-.10950	.07380	-.03090	.01660	.02250
.597	.490	-.06560	.06960	-.00350	.00110	.00140	.02170	.02240
	GRADIENT	-.00092	.00081	-.01745	.01204	-.00529	.00012	-.00028

RUN NO. 2336/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.904	-5.810	-.04770	.06110	.11650	-.08040	.03930	.02420	.03140
.904	-3.730	-.04190	.05850	.07820	-.05490	.02770	.02600	.03100
.904	-1.600	-.04000	.05870	.03650	-.02550	.01340	.02800	.03030
.904	.480	-.04180	.06110	-.00310	.00200	.00000	.02870	.03050
.904	2.580	-.04190	.06060	-.04230	.02920	-.01330	.02750	.03030
.904	4.670	-.04440	.06120	-.08280	.05780	-.02650	.02490	.03050
.904	6.760	-.04990	.06470	-.12100	.08350	-.03860	.02390	.03130
.904	.480	-.03810	.05790	-.00150	.00090	.00020	.02690	.03040
	GRADIENT	-.00033	.00035	-.01910	.01335	-.00644	-.00013	-.00005

RUN NO. 2334/ 0 RN/L = 6.56 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.002	-5.840	-.05830	.08120	.11790	-.08130	.04470	.04280	.03050
1.002	-3.750	-.06060	.08650	.07420	-.05130	.02930	.04520	.03160
1.002	-1.600	-.05530	.08450	.03430	-.02370	.01430	.04650	.03190
1.002	.490	-.05390	.08360	-.00410	.00270	-.00010	.04580	.03140
1.002	2.610	-.06040	.09050	-.04250	.02950	-.01480	.04760	.03360
1.002	4.690	-.06000	.08600	-.08450	.05890	-.03040	.04230	.03110
1.002	6.790	-.05700	.08420	-.12550	.08650	-.04580	.04220	.03380
1.002	.490	-.05440	.08320	-.00390	.00210	-.00020	.04470	.03080
	GRADIENT	-.00018	.00024	-.01869	.01297	-.00704	-.00022	.00003

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72035) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	3.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2335/ 0 RN/L = 6.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.203	-5.920	.00170	.04330	.11200	-.07240	.04690	.05910	.03950
1.203	-3.800	.00400	.04470	.07180	-.04670	.03110	.06080	.03810
1.203	-1.630	.00330	.04790	.03400	-.02230	.01550	.06090	.03780
1.203	.490	.00290	.04860	-.00160	.00010	-.00030	.06030	.03730
1.203	2.610	.00560	.04560	-.03650	.02220	-.01550	.06040	.03780
1.203	4.750	.01720	.03420	-.07780	.04950	-.03210	.06020	.03870
1.203	6.890	.01400	.03500	-.11800	.07490	-.04850	.05810	.03950
1.203	.500	.01040	.04260	-.00270	.00050	-.00080	.06100	.03760
	GRADIENT	.00134	-.00109	-.01732	.01110	-.00738	-.00008	.00006

RUN NO. 2306/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.465	-5.940	.01630	.02890	.11830	-.07740	.04560	.06450	.03270
1.465	-3.810	.02220	.02600	.07460	-.04910	.02990	.06480	.03200
1.465	-1.630	.03010	.02170	.03180	-.02050	.01390	.06440	.03260
1.465	.500	.03490	.01840	-.00850	.00590	-.00150	.06460	.03200
1.465	2.640	.03640	.01710	-.05100	.03430	-.01720	.06140	.03490
1.465	4.780	.03400	.01760	-.09580	.06450	-.03370	.05930	.03720
1.465	6.940	.03080	.01820	-.13830	.09130	-.04860	.05970	.03720
1.465	.480	.03510	.01820	-.00850	.00560	-.00130	.06440	.03220
	GRADIENT	.00140	-.00100	-.01975	.01315	-.00738	-.00065	.00059

RUN NO. 2305/ 0 RN/L = 6.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-5.980	.04040	.00100	.12200	-.07920	.04100	.06430	.02360
1.962	-3.820	.05210	-.00800	.07740	-.05110	.02630	.06280	.02340
1.962	-1.610	.05770	-.01060	.03390	-.02220	.01190	.06350	.02380
1.962	.520	.06030	-.01200	-.00750	.00510	-.00170	.06350	.02410
1.962	2.660	.05830	-.00980	-.04860	.03270	-.01570	.06410	.02410
1.962	4.800	.05770	-.00910	-.09270	.06120	-.03040	.06370	.02490
1.962	7.000	.05430	-.00840	-.13620	.08810	-.04470	.06180	.02540
1.962	.460	.06050	-.01290	-.00750	.00500	-.00180	.06260	.02430
	GRADIENT	.00055	-.00007	-.01965	.01299	-.00655	.00011	.00015

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)/(S1) (R72035) (22 FEB 73)

REFERENCE DATA

$REF	= 3220.0000 SQ.FT.	XMRP	= .0000		
LREF	= 1328.0000 IN.	YMRP	= .0000		
BREF	= 1328.0000 IN.	ZMRP	= .0000		
$CALE	= 100.0000 PERCNT				

PARAMETRIC DATA

ALPHA	= .000	CONFIG	= 3.000
RUDDER	= .000	AILRON	= .000
ORBINC	= .000	DELTAZ	= .120
X-SRB	= -.624	RUDFLR	= 10.000
ELEVTR	= .000		

RUN NO. 2291/ 0 RN/L = 4.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.600	-.00620	.01010	.06440	-.03750	.01850	.05970	.00260
4.960	-3.590	-.01090	.01390	.04190	-.02380	.01150	.06000	.00280
4.960	-1.540	-.00570	.01200	.01960	-.01130	.00570	.05930	.00300
4.960	.480	-.00530	.01330	-.00070	.00040	.00030	.05920	.00320
4.960	2.530	-.00240	.01010	-.02230	.01220	-.00580	.05860	.00320
4.960	4.560	-.00040	.00700	-.04370	.02470	-.01190	.05850	.00310
4.960	6.560	.00020	.00640	-.06570	.03900	-.01890	.05770	.00340
4.960	.480	-.00960	.01490	-.00240	.00100	-.00040	.05900	.00330
	GRADIENT	.00119	-.00077	-.01046	.00592	-.00286	-.00018	.00004

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72036) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 4.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1137/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.21750	.17700	.02040	-.01740	.00900	.03370	.01180
.601	-4.000	-.18580	.15370	.02130	-.01810	.00930	.03410	.01190
.601	-2.000	-.12600	.11050	.02020	-.01730	.00880	.03590	.01090
.601	.000	-.06500	.06650	.01980	-.01670	.00860	.03940	.00880
.601	2.000	.00770	.01570	.01890	-.01530	.00870	.03870	.00850
.601	4.000	.07480	-.03280	.01770	-.01390	.00960	.03850	.00640
.601	6.000	.13690	-.07850	.01560	-.01190	.00920	.03570	.00560
.601	8.000	.19650	-.12400	.01630	-.01190	.00970	.03390	.00370
.601	10.000	.24840	-.16410	.01760	-.01260	.01040	.03330	.00210
	GRADIENT	.03240	-.02321	-.00034	.00042	.00002	.00063	-.00061

RUN NO. 1138/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.20940	.17840	.02040	-.01770	.00680	.03140	.03160
.902	-4.000	-.16870	.14840	.02180	-.01860	.00730	.03620	.02710
.902	-2.000	-.10310	.10050	.02370	-.01980	.00800	.03510	.02790
.902	.000	-.03890	.05560	.02230	-.01850	.00780	.03360	.03000
.902	2.000	.03480	.00250	.02090	-.01710	.00840	.03570	.02690
.902	4.000	.09600	-.04320	.02150	-.01730	.00900	.03660	.02340
.902	6.000	.16580	-.09560	.02250	-.01760	.00990	.03550	.01940
.902	8.000	.22610	-.14090	.02460	-.01860	.01130	.03440	.01700
.902	10.000	.27250	-.17710	.02350	-.01680	.01180	.03460	.01460
	GRADIENT	.03382	-.02443	.00000	.00014	.00021	.00032	-.00059

RUN NO. 1140/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.22130	.19510	.01740	-.01480	.00540	.04470	.02840
.999	-4.000	-.19070	.17340	.01860	-.01550	.00570	.04820	.02810
.999	-2.000	-.11180	.11250	.02220	-.01810	.00770	.04300	.02590
.999	.000	-.04180	.06430	.02070	-.01650	.00690	.04700	.02730
.999	2.000	.03160	.01010	.02020	-.01620	.00730	.04820	.02450
.999	4.000	.10180	-.04360	.02190	-.01730	.00870	.04580	.02100
.999	6.000	.18180	-.10460	.02410	-.01860	.00870	.04730	.02030
.999	8.000	.24290	-.15540	.02610	-.01950	.00900	.04550	.01670
.999	10.000	.28470	-.19310	.02340	-.01650	.00910	.04510	.01460
	GRADIENT	.03622	-.02666	.00038	-.00019	.00031	.00013	-.00072

MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72036) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT.	XMRP = .0000		
LREF = 1328.0000 IN.	YMRP = .0000		
BREF = 1328.0000 IN.	ZMRP = .0000		
SCALE = 100.0000 PERCNT			

PARAMETRIC DATA

BETA = .000	CONFIG = 4.000		
RUDDER = .000	AILRON = .000		
ORBINC = .000	DELTAZ = .120		
X-SRB = .000	RUDFLR = 10.000		
ELEVTR = .000			

RUN NO. 1139/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-5.000	-.15710	.16480	.00740	-.00640	-.00120	.05780	.03860
1.200	-4.000	-.11770	.13350	.00900	-.00710	-.00020	.05660	.04020
1.200	-2.000	-.02580	.06090	.00910	-.00700	.00100	.05920	.03710
1.200	.000	.06030	-.00730	.00830	-.00600	.00250	.06290	.03460
1.200	2.000	.14120	-.06950	.00840	-.00570	.00400	.06570	.03220
1.200	4.000	.21880	-.12870	.00750	-.00510	.00260	.06670	.03040
1.200	6.000	.28090	-.17440	.00900	-.00570	.00230	.06680	.02800
1.200	8.000	.30520	-.19420	.01220	-.00820	.00220	.06780	.02480
1.200	10.000	.33070	-.21860	.01670	-.01170	.00190	.07000	.01950
	GRADIENT	.04217	-.03297	-.00005	.00019	.00050	.00118	-.00106

RUN NO. 1163/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.474	-5.000	-.14410	.14970	.00620	-.00590	-.00140	.06750	.02450
1.474	-4.000	-.10740	.12090	.00830	-.00760	-.00050	.06700	.02510
1.474	-2.000	-.03250	.06270	.00970	-.00860	.00010	.06500	.02690
1.474	.000	.03800	.00710	.01000	-.00820	.00050	.06710	.02570
1.474	2.000	.10720	-.04610	.00980	-.00780	.00150	.06940	.02370
1.474	4.000	.17380	-.09610	.00820	-.00630	.00150	.07130	.02260
1.474	6.000	.23330	-.14150	.00680	-.00470	.00120	.07220	.02210
1.474	8.000	.27630	-.17510	.00640	-.00410	.00160	.07290	.02080
1.474	10.000	.30650	-.19770	.00840	-.00520	.00110	.07210	.01990
	GRADIENT	.03541	-.02743	.00020	-.00001	.00032	.00046	-.00025

RUN NO. 1212/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.955	-5.000	-.08520	.10340	.01060	-.00870	.00290	.07100	.01840
1.955	-4.000	-.05590	.08010	.01020	-.00860	.00290	.06960	.01840
1.955	-2.000	-.00020	.03640	.01000	-.00840	.00290	.06680	.01920
1.955	.000	.05760	-.00900	.01110	-.00890	.00330	.06550	.01900
1.955	2.000	.11400	-.05240	.01030	-.00840	.00350	.06490	.01800
1.955	4.000	.16810	-.09140	.01080	-.00830	.00310	.06830	.01590
1.955	6.000	.22030	-.12970	.01190	-.00940	.00230	.07410	.01340
1.955	8.000	.25430	-.15530	.01640	-.01260	.00140	.07540	.01280
1.955	10.000	.25830	-.15960	.01780	-.01360	.00140	.07150	.01400
	GRADIENT	.02820	-.02178	.00004	.00003	.00005	-.00042	-.00022

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72036) (22 FEB 73

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 4.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1255/ 0 RN/L = 4.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.01460	.02290	.01870	-.00940	.00580	.07110	.00260
4.960	-4.000	-.02230	.02410	.01370	-.00700	.00430	.06930	.00230
4.960	-2.000	-.02710	.02190	.00810	-.00450	.00260	.06480	.00190
4.960	.000	-.02090	.01510	.00630	-.00370	.00220	.06000	.00180
4.960	2.000	-.00530	.00400	.00690	-.00420	.00250	.05570	.00190
4.960	4.000	.01270	-.01090	.00790	-.00470	.00230	.04850	.00150
4.960	6.000	.03070	-.02620	.00660	-.00410	.00180	.04180	.00070
4.960	8.000	.04210	-.03410	.00550	-.00290	.00150	.03700	.00040
4.960	10.000	.04510	-.03620	.00490	-.00300	.00190	.03050	.00070
	GRADIENT	.00316	-.00372	-.00111	.00047	-.00034	-.00245	-.00010

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72037) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 4.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1144/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.27530	.21760	.00600	-.00650	.00610	.03760	.01300
.600	-4.000	-.24000	.19170	.01210	-.01060	.00800	.03950	.01150
.600	-2.000	-.17770	.14590	.01090	-.00960	.00790	.04100	.01080
.600	.000	-.12100	.10540	.01110	-.00960	.00780	.04080	.01130
.600	2.000	-.05630	.05950	.01120	-.00880	.00770	.03950	.01120
.600	4.000	.01360	.00840	.01050	-.00800	.00820	.04020	.00810
.600	6.000	.07380	-.03680	.00910	-.00650	.00830	.03810	.00630
.600	8.000	.12860	-.07850	.01050	-.00700	.00900	.03510	.00500
.600	10.000	.18070	-.11870	.01190	-.00770	.00980	.03230	.00370
	GRADIENT	.03156	-.02280	.00026	.00000	.00013	.00017	-.00038

RUN NO. 1143/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.904	-5.000	-.28190	.23070	.01580	-.01390	.00680	.03390	.03050
.904	-4.000	-.24680	.20420	.01820	-.01570	.00730	.03420	.02970
.904	-2.000	-.17540	.15130	.01670	-.01450	.00690	.03530	.02850
.904	.000	-.10580	.10150	.01750	-.01470	.00750	.03470	.02850
.904	2.000	-.03790	.05300	.01780	-.01450	.00810	.03510	.02690
.904	4.000	.02660	.00490	.01850	-.01460	.00860	.03550	.02380
.904	6.000	.09090	-.04320	.01860	-.01450	.00910	.03330	.02070
.904	8.000	.15700	-.09310	.02050	-.01530	.01050	.03130	.01760
.904	10.000	.20750	-.13250	.02020	-.01440	.01130	.02950	.01530
	GRADIENT	.03442	-.02508	.00019	.00001	.00019	.00015	-.00065

RUN NO. 1141/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.28890	.24340	.01960	-.01640	.00720	.04870	.02790
.999	-4.000	-.25430	.21730	.01970	-.01660	.00710	.04840	.02600
.999	-2.000	-.18550	.16800	.01930	-.01560	.00690	.05140	.02840
.999	.000	-.11090	.11340	.01890	-.01490	.00690	.05010	.02860
.999	2.000	-.03990	.06110	.01910	-.01480	.00730	.04990	.02690
.999	4.000	.03050	.00740	.02100	-.01620	.00820	.04790	.02320
.999	6.000	.10030	-.04760	.02320	-.01800	.00890	.04530	.02020
.999	8.000	.16600	-.10190	.02590	-.01990	.00900	.04300	.01720
.999	10.000	.21930	-.14830	.02490	-.01850	.00940	.04030	.01510
	GRADIENT	.03563	-.02622	.00008	.00011	.00009	-.00002	-.00043

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72037) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1142/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.201	-5.000	-.29240	.26760	.01250	-.01100	.00190	.06610	.03250
1.201	-4.000	-.25170	.23590	.01140	-.01000	.00100	.06540	.03310
1.201	-2.000	-.15380	.15790	.01070	-.00930	.00110	.06310	.03310
1.201	.000	-.05880	.08400	.00970	-.00790	.00210	.06320	.03310
1.201	2.000	.02900	.01470	.00940	-.00700	.00370	.06500	.03150
1.201	4.000	.11520	-.05160	.01040	-.00760	.00480	.06520	.02900
1.201	6.000	.18830	-.10880	.01040	-.00750	.00330	.06370	.02650
1.201	8.000	.23520	-.14660	.01200	-.00860	.00250	.06380	.02370
1.201	10.000	.25630	-.16720	.01460	-.01050	.00230	.06460	.01930
	GRADIENT	.04578	-.03590	-.00026	.00041	.00038	-.00007	-.00036

RUN NO. 1171/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.21670	.20380	.00700	-.00670	-.00140	.06450	.02890
1.461	-4.000	-.17470	.17110	.00660	-.00620	-.00180	.06590	.02750
1.461	-2.000	-.09200	.10560	.00660	-.00610	-.00120	.06830	.02510
1.461	.000	-.02500	.05290	.00930	-.00780	-.00030	.06790	.02540
1.461	2.000	.05340	-.00820	.00760	-.00640	.00050	.06920	.02400
1.461	4.000	.11950	-.05880	.00660	-.00540	.00110	.06840	.02380
1.461	6.000	.18040	-.10590	.00580	-.00440	.00080	.06750	.02370
1.461	8.000	.22010	-.13690	.00610	-.00410	.00140	.06730	.02210
1.461	10.000	.25190	-.16070	.00840	-.00530	.00130	.06530	.02110
	GRADIENT	.03734	-.02922	.00006	.00006	.00032	.00043	-.00054

RUN NO. 1213/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.951	-5.000	-.11260	.11640	.00830	-.00710	.00200	.06170	.02020
1.951	-4.000	-.09090	.10170	.01260	-.01000	.00360	.06060	.02150
1.951	-2.000	-.04890	.06840	.00960	-.00830	.00280	.05850	.02150
1.951	.000	.00890	.02460	.01100	-.00890	.00370	.05690	.02190
1.951	2.000	.05980	-.01530	.01050	-.00860	.00360	.05600	.02030
1.951	4.000	.11040	-.05260	.01020	-.00820	.00290	.05810	.01890
1.951	6.000	.15740	-.08730	.01080	-.00840	.00210	.06160	.01710
1.951	8.000	.19350	-.11410	.01560	-.01220	.00150	.06330	.01590
1.951	10.000	.20530	-.12370	.01760	-.01370	.00160	.06240	.01600
	GRADIENT	.02506	-.01913	.00004	-.00001	.00007	-.00050	-.00017

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72037) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCENT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1254/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.02990	.03370	.02660	-.01330	.00910	.07560	.00230
4.960	-4.000	-.03690	.03530	.01880	-.00940	.00630	.07200	.00230
4.960	-2.000	-.04200	.03380	.00870	-.00460	.00260	.06530	.00230
4.960	.000	-.03650	.02720	.00470	-.00290	.00130	.05910	.00220
4.960	2.000	-.02160	.01670	.00620	-.00390	.00210	.05410	.00210
4.960	4.000	-.00360	.00080	.00630	-.00390	.00180	.04620	.00170
4.960	6.000	.02190	-.01810	.00740	-.00420	.00200	.03950	.00100
4.960	8.000	.03170	-.02590	.00440	-.00240	.00100	.03370	.00070
4.960	10.000	.03260	-.02740	.00360	-.00250	.00130	.02780	.00110
	GRADIENT	.00298	-.00358	-.00211	.00096	-.00074	-.00318	-.00006

MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72038) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1320.0000 IN.	YMRP =	.0000
BREF =	1320.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1145/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.14780	.12750	.01500	-.01300	.00770	.04170	.00580
.602	-4.000	-.11590	.10460	.01470	-.01290	.00700	.03940	.00780
.602	-2.000	-.04970	.05860	.01500	-.01290	.00750	.04480	.00410
.602	.000	.01440	.01320	.01840	-.01420	.00890	.04380	.00590
.602	2.000	.08060	-.03360	.01680	-.01310	.00740	.04690	.00270
.602	4.000	.15320	-.08580	.01310	-.00910	.00800	.04480	.00290
.602	6.000	.22470	-.13850	.01250	-.00890	.00790	.04550	.00000
.602	8.000	.28000	-.17960	.01480	-.01060	.00860	.04260	.00140
.602	10.000	.33060	-.21780	.01610	-.01110	.00970	.04550	-.00130
	GRADIENT	.03323	-.02350	-.00000	.00028	.00007	.00058	-.00044

RUN NO. 1146/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.11080	.10890	.01850	-.01540	.00640	.04040	.02900
.900	-4.000	-.08700	.09170	.01690	-.01370	.00600	.04160	.02820
.900	-2.000	-.02170	.04480	.01990	-.01560	.00670	.04230	.02710
.900	.000	.04720	-.00290	.01840	-.01410	.00690	.04250	.02780
.900	2.000	.12020	-.05570	.01590	-.01230	.00710	.04350	.02510
.900	4.000	.19160	-.10890	.01860	-.01420	.00840	.04310	.02230
.900	6.000	.26320	-.16080	.01770	-.01310	.00940	.04450	.01880
.900	8.000	.31930	-.20220	.02000	-.01390	.01130	.04720	.01830
.900	10.000	.36410	-.23720	.01900	-.01190	.01160	.05020	.01570
	GRADIENT	.03400	-.02438	-.00006	.00017	.00021	.00029	-.00065

RUN NO. 1148/ 0 RN/L = 6.52 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.001	-5.000	-.14540	.14390	.01180	-.00950	.00310	.05110	.02920
1.001	-4.000	-.10180	.10920	.01800	-.01450	.00620	.04940	.02370
1.001	-2.000	-.02840	.05580	.01780	-.01430	.00610	.04750	.02520
1.001	.000	.04280	.00650	.01780	-.01350	.00590	.05150	.02560
1.001	2.000	.12020	-.05000	.01780	-.01330	.00700	.05130	.02470
1.001	4.000	.20050	-.11250	.01920	-.01510	.00910	.04710	.02050
1.001	6.000	.27790	-.17160	.02050	-.01550	.00820	.04910	.02090
1.001	8.000	.33090	-.21510	.02060	-.01440	.00680	.05480	.01820
1.001	10.000	.35840	-.23930	.01700	-.00990	.00670	.05740	.01550
	GRADIENT	.03792	-.02779	.00051	-.00032	.00048	-.00015	-.00059

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72038) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1147/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.201	-5.000	-.01940	.06230	.00250	-.00230	-.00180	.05140	.04930
1.201	-4.000	.01500	.03500	.00720	-.00510	.00070	.05010	.05030
1.201	-2.000	.10320	-.03490	.00800	-.00590	.00220	.05850	.04290
1.201	.000	.18420	-.09880	.00570	-.00370	.00380	.06380	.03960
1.201	2.000	.26670	-.16100	.00710	-.00430	.00390	.07020	.03450
1.201	4.000	.33970	-.21380	.00430	-.00230	.00140	.07000	.03490
1.201	6.000	.38670	-.24720	.00530	-.00290	.00070	.07340	.03220
1.201	8.000	.40340	-.26010	.00760	-.00460	.00100	.07750	.02660
1.201	10.000	.41670	-.27190	.01250	-.00820	.00100	.08120	.02130
	GRADIENT	.04050	-.03126	.00005	.00010	.00039	.00245	-.00190

RUN NO. 1177/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.464	-5.000	-.06540	.09380	.00480	-.00420	-.00150	.06890	.02260
1.464	-4.000	-.03020	.06630	.00860	-.00730	-.00010	.06780	.02440
1.464	-2.000	.04630	.00610	.00990	-.00850	.00000	.06590	.02740
1.464	.000	.11640	-.04780	.00970	-.00760	.00050	.07030	.02590
1.464	2.000	.18440	-.10000	.00900	-.00700	.00110	.07410	.02370
1.464	4.000	.25730	-.15340	.00750	-.00550	.00160	.07860	.02190
1.464	6.000	.31890	-.19960	.00600	-.00380	.00200	.08120	.02130
1.464	8.000	.36410	-.23430	.00410	-.00250	.00190	.08340	.02080
1.464	10.000	.39650	-.25820	.00650	-.00390	.00110	.08410	.02010
	GRADIENT	.03579	-.02749	.00018	-.00004	.00029	.00115	-.00014

RUN NO. 1216/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.949	-5.000	-.01740	.05470	.01110	-.00900	.00280	.07430	.01880
1.949	-4.000	.01160	.02890	.00800	-.00690	.00180	.07220	.01850
1.949	-2.000	.07330	-.01830	.00950	-.00780	.00220	.07130	.01820
1.949	.000	.13600	-.06710	.01070	-.00830	.00260	.06820	.01900
1.949	2.000	.18620	-.10620	.01010	-.00770	.00290	.06840	.01750
1.949	4.000	.24540	-.14710	.00890	-.00650	.00250	.07410	.01480
1.949	6.000	.29960	-.18520	.00980	-.00690	.00260	.07940	.01250
1.949	8.000	.32140	-.20140	.01210	-.00920	-.00010	.07770	.01290
1.949	10.000	.30820	-.19180	.01370	-.01150	-.00120	.06970	.01630
	GRADIENT	.02922	-.02245	-.00003	.00014	.00004	-.00021	-.00035

MSFC 545 (1A1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72038) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1258/ 0 RN/L = 4.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.01790	.00910	.01110	-.00580	.00470	.07150	.00150
4.960	-4.000	-.00800	.00360	.01070	-.00570	.00460	.06920	.00150
4.960	-2.000	.00990	-.00650	.01030	-.00560	.00440	.06360	.00150
4.960	.000	.01970	-.01350	.00850	-.00470	.00360	.05750	.00150
4.960	2.000	.01460	-.01460	.00330	-.00190	.00170	.05120	.00170
4.960	4.000	.03230	-.03000	.00840	-.00520	.00260	.04760	.00080
4.960	6.000	.05410	-.04680	.00810	-.00580	.00240	.04660	.00020
4.960	8.000	.06200	-.04830	.01070	-.00660	.00240	.04040	.00000
4.960	10.000	.06270	-.04830	.00930	-.00590	.00230	.03030	.00000
	GRADIENT	.00497	-.00393	-.00058	.00024	-.00031	-.00276	-.00005

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1/2)/(S1/2) (R72039) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 4.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1160/ 0 RN/L = 5.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.593	-5.000	-.23560	.18830	.01980	-.01780	.00800	.03010	.01080
.593	-4.000	-.20470	.16640	.01920	-.01690	.00850	.03330	.00870
.593	-2.000	-.13340	.11720	.01960	-.01670	.00880	.03620	.00810
.593	.000	-.06520	.06970	.01740	-.01480	.00840	.03710	.00750
.593	2.000	.00450	.01950	.01550	-.01330	.00820	.03590	.00720
.593	4.000	.07650	-.03130	.01770	-.01410	.00930	.03720	.00350
.593	6.000	.14390	-.08110	.01660	-.01260	.00950	.03650	.00070
.593	8.000	.21040	-.13030	.01710	-.01290	.01060	.03450	-.00040
.593	10.000	.26680	-.17350	.01760	-.01300	.01090	.03420	-.00180
	GRADIENT	.03475	-.02443	-.00036	.00048	.00008	.00062	-.00063

RUN NO. 1159/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.22650	.18720	.02270	-.01960	.00830	.03070	.02030
.899	-4.000	-.18800	.15940	.02350	-.02020	.00840	.03320	.01870
.899	-2.000	-.11890	.11000	.02320	-.01950	.00900	.03400	.01910
.899	.000	-.04710	.06030	.02330	-.01930	.00900	.03340	.01980
.899	2.000	.01980	.01280	.02300	-.01880	.00960	.03520	.01610
.899	4.000	.08480	-.03440	.02210	-.01750	.01020	.03350	.01340
.899	6.000	.15390	-.08600	.02110	-.01650	.01080	.03340	.00930
.899	8.000	.21820	-.13260	.02110	-.01620	.01140	.03330	.00660
.899	10.000	.27010	-.17100	.02170	-.01560	.01250	.03340	.00480
	GRADIENT	.03459	-.02454	-.00008	.00024	.00020	.00028	-.00064

RUN NO. 1157/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.23740	.20690	.02060	-.01700	.00710	.04440	.02790
1.000	-4.000	-.20380	.18260	.02080	-.01690	.00700	.04680	.02740
1.000	-2.000	-.13130	.13110	.01970	-.01560	.00660	.05050	.02780
1.000	.000	-.05770	.07940	.01990	-.01560	.00640	.05130	.02740
1.000	2.000	.01850	.02420	.01870	-.01430	.00660	.05200	.02500
1.000	4.000	.09010	-.03000	.02110	-.01640	.00010	.05030	.02050
1.000	6.000	.17340	-.09310	.02260	-.01740	.00780	.05250	.01850
1.000	8.000	.24370	-.15040	.02490	-.01870	.00830	.05270	.01540
1.000	10.000	.29580	-.19460	.02500	-.01770	.01010	.05040	.01320
	GRADIENT	.03662	-.02636	-.00005	.00016	.00006	.00060	-.00070

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72039) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 4.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1158/ 0 RN/L = 6.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-5.000	-.26050	.24460	.01630	-.01340	.00300	.07150	.02590
1.200	-4.000	-.22010	.21370	.01650	-.01320	.00260	.07250	.02540
1.200	-2.000	-.13310	.14600	.01610	-.01290	.00290	.07310	.02530
1.200	.000	-.04200	.07560	.01580	-.01240	.00360	.07390	.02440
1.200	2.000	.04670	.00700	.01540	-.01180	.00510	.07660	.02280
1.200	4.000	.13850	-.06300	.01590	-.01190	.00570	.07950	.01960
1.200	6.000	.20550	-.11590	.01700	-.01270	.00440	.07980	.01610
1.200	8.000	.24670	-.15090	.01980	-.01490	.00320	.08400	.01070
1.200	10.000	.26530	-.17250	.02180	-.01610	.00390	.08840	.00360
	GRADIENT	.04446	-.03432	-.00009	.00019	.00034	.00082	-.00063

RUN NO. 1195/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.16660	.16790	.00940	-.00840	.00050	.06270	.03060
1.463	-4.000	-.12990	.13990	.01040	-.00920	.00090	.06310	.03060
1.463	-2.000	-.05520	.08210	.01130	-.00960	.00130	.06520	.02920
1.463	.000	.02330	.02080	.01120	-.00900	.00120	.06800	.02750
1.463	2.000	.09930	-.03700	.01080	-.00840	.00180	.07110	.02520
1.463	4.000	.17190	-.09180	.01010	-.00730	.00200	.07360	.02300
1.463	6.000	.24080	-.14360	.00890	-.00620	.00190	.07410	.02220
1.463	8.000	.29400	-.18410	.00710	-.00470	.00170	.07480	.02100
1.463	10.000	.33580	-.21510	.00950	-.00610	.00160	.07490	.01980
	GRADIENT	.03783	-.02909	.00006	.00014	.00015	.00126	-.00087

RUN NO. 1211/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.949	-5.000	-.08880	.10400	.01210	-.00980	.00370	.07210	.01900
1.949	-4.000	-.05900	.08150	.01300	-.01050	.00430	.07140	.01880
1.949	-2.000	-.00160	.03720	.01290	-.01030	.00440	.06970	.01890
1.949	.000	.05720	-.00790	.01340	-.01040	.00460	.06900	.01810
1.949	2.000	.11520	-.05170	.01220	-.00960	.00450	.06910	.01650
1.949	4.000	.17310	-.09320	.01260	-.00970	.00420	.07220	.01440
1.949	6.000	.23270	-.13720	.01310	-.00990	.00370	.07590	.01200
1.949	8.000	.27210	-.16670	.01430	-.01080	.00240	.07570	.01170
1.949	10.000	.28010	-.17350	.01740	-.01370	.00200	.07320	.01270
	GRADIENT	.02909	-.02200	-.00000	.00006	.00004	-.00009	-.00048

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72039) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 4.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1256/ 0 RN/L = 4.80 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.02960	.02930	.01060	-.00650	.00370	.08080	.00270
4.960	-4.000	-.03180	.02890	.00980	-.00590	.00350	.07640	.00240
4.960	-2.000	-.03070	.02530	.00890	-.00530	.00330	.06840	.00190
4.960	.000	-.02300	.01800	.00820	-.00470	.00320	.06180	.00170
4.960	2.000	-.00870	.00690	.00670	-.00380	.00260	.05680	.00170
4.960	4.000	.00690	-.00640	.00780	-.00460	.00240	.05380	.00120
4.960	6.000	.02070	-.01930	.00700	-.00440	.00250	.04790	.00060
4.960	8.000	.03610	-.02930	.00890	-.00550	.00230	.04120	.00030
4.960	10.000	.04000	-.03160	.00820	-.00520	.00250	.03420	.00020
	GRADIENT	.00410	-.00394	-.00036	.00025	-.00014	-.00306	-.00015

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72040) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1153/ 0 RN/L = 5.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.20950	.22720	.02380	-.02000	.00980	.03160	.01310
.598	-4.000	-.25380	.20110	.02100	-.01810	.00940	.03290	.01230
.598	-2.000	-.18600	.15230	.01980	-.01700	.00920	.03490	.01090
.598	.000	-.12700	.11090	.02150	-.01800	.00940	.03540	.01010
.598	2.000	-.05000	.05600	.01770	-.01500	.00880	.03740	.00730
.598	4.000	.01970	.00700	.01990	-.01590	.01010	.03550	.00680
.598	6.000	.08740	-.04240	.01980	-.01530	.01090	.03270	.00560
.598	8.000	.15160	-.09000	.01940	-.01450	.01120	.03010	.00330
.598	10.000	.20740	-.13300	.01990	-.01460	.01160	.02820	.00110
	GRADIENT	.03410	-.02427	-.00040	.00043	.00000	.00050	-.00073

RUN NO. 1154/ 0 RN/L = 6.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.29390	.23870	.01810	-.01590	.00790	.03570	.02840
.901	-4.000	-.25720	.21240	.02030	-.01740	.00830	.03440	.02930
.901	-2.000	-.17930	.15540	.02200	-.01830	.00910	.03490	.02860
.901	.000	-.11390	.10840	.02070	-.01720	.00870	.03540	.02770
.901	2.000	-.04120	.05670	.02070	-.01720	.00850	.03480	.02540
.901	4.000	.02130	.01070	.02020	-.01660	.00900	.03620	.02010
.901	6.000	.08720	-.03730	.02120	-.01690	.01030	.03250	.01810
.901	8.000	.15970	-.09120	.02270	-.01750	.01170	.03060	.01380
.901	10.000	.21440	-.13270	.02430	-.01790	.01320	.02880	.01070
	GRADIENT	.03517	-.02541	.00013	-.00001	.00008	.00008	-.00086

RUN NO. 1156/ 0 RN/L = 8.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.998	-5.000	-.30240	.25570	.01940	-.01650	.00740	.05320	.02800
.998	-4.000	-.26420	.22800	.02100	-.01710	.00750	.05360	.02830
.998	-2.000	-.18790	.17120	.02070	-.01660	.00770	.05300	.02700
.998	.000	-.11290	.11650	.01950	-.01550	.00740	.05300	.02570
.998	2.000	-.04580	.06830	.01990	-.01560	.00710	.05200	.02620
.998	4.000	.02790	.01270	.02150	-.01680	.00830	.05070	.02050
.998	6.000	.10130	-.04300	.02370	-.01830	.00920	.04860	.01910
.998	8.000	.17580	-.10340	.02770	-.02130	.01030	.04580	.01510
.998	10.000	.23560	-.15390	.02830	-.02050	.01170	.04320	.01250
	GRADIENT	.03661	-.02688	.00008	.00006	.00005	-.00027	-.00071

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72040) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT.	XMRP =	.0000	
LREF = 1328.0000 IN.	YMRP =	.0000	
BREF = 1328.0000 IN.	ZMRP =	.0000	
SCALE = 100.0000 PERCNT			

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1155/ 0 RN/L = 6.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.26170	.24620	.01040	-.00900	.00040	.06300	.03940
1.199	-4.000	-.22170	.21470	.01100	-.00920	.00060	.06350	.03870
1.199	-2.000	-.13260	.14360	.00940	-.00790	.00110	.06510	.03540
1.199	.000	-.04400	.07450	.00920	-.00700	.00230	.06530	.03370
1.199	2.000	.04110	.00810	.00830	-.00610	.00330	.06660	.03140
1.199	4.000	.12490	-.05630	.00820	-.00580	.00430	.06850	.02790
1.199	6.000	.19550	-.11020	.00950	-.00650	.00390	.06790	.02460
1.199	8.000	.24320	-.14630	.01120	-.00800	.00290	.06930	.02050
1.199	10.000	.25290	-.16100	.01520	-.01100	.00310	.07360	.01380
	GRADIENT	.04324	-.03387	-.00030	.00041	.00045	.00057	-.00125

RUN NO. 1189/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.466	-5.000	-.23350	.21870	.01050	-.00930	.00110	.06370	.03350
1.466	-4.000	-.19740	.19130	.01110	-.00980	.00090	.06390	.03330
1.466	-2.000	-.12680	.13560	.01280	-.01080	.00160	.06590	.03040
1.466	.000	-.04240	.06900	.01080	-.00910	.00120	.06660	.02860
1.466	2.000	.03380	.01060	.01080	-.00860	.00160	.06800	.02690
1.466	4.000	.10600	-.04450	.00950	-.00730	.00170	.06870	.02560
1.466	6.000	.17670	-.09850	.00890	-.00630	.00160	.06960	.02350
1.466	8.000	.23080	-.14010	.00790	-.00530	.00160	.06920	.02240
1.466	10.000	.27320	-.17220	.01040	-.00690	.00170	.06780	.02160
	GRADIENT	.03812	-.02963	-.00014	.00025	.00007	.00058	-.00093

RUN NO. 1214/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.951	-5.000	-.11790	.12000	.01050	-.00850	.00310	.06300	.02150
1.951	-4.000	-.09420	.10240	.01240	-.00960	.00390	.06200	.02170
1.951	-2.000	-.04810	.06770	.01210	-.00950	.00410	.06050	.02200
1.951	.000	.01000	.02290	.01270	-.00990	.00440	.05960	.02060
1.951	2.000	.06220	-.01670	.01180	-.00900	.00410	.05860	.01880
1.951	4.000	.11940	-.05770	.01200	-.00910	.00380	.06060	.01700
1.951	6.000	.17440	-.09840	.01210	-.00900	.00360	.06300	.01490
1.951	8.000	.21780	-.13020	.01430	-.01110	.00270	.06440	.01430
1.951	10.000	.23020	-.13900	.01790	-.01460	.00220	.06480	.01500
	GRADIENT	.02642	-.01990	.00008	-.00001	.00006	-.00034	-.00052

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72040) (22 FEB 73

REFERENCE DATA

BREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1253/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.07680	.06050	.01440	-.00660	.00480	.08200	.00200
4.960	-4.000	-.07120	.05510	.01120	-.00550	.00360	.07710	.00210
4.960	-2.000	-.05860	.04380	.00730	-.00420	.00230	.06870	.00220
4.960	.000	-.04520	.03270	.00550	-.00340	.00180	.06230	.00210
4.960	2.000	-.03280	.02260	.00450	-.00250	.00190	.05880	.00190
4.960	4.000	-.01420	.00790	.00440	-.00280	.00150	.05330	.00150
4.960	6.000	.00680	-.00880	.00530	-.00290	.00190	.04500	.00090
4.960	8.000	.02700	-.02210	.00940	-.00570	.00250	.03700	.00050
4.960	10.000	.02940	-.02460	.00670	-.00430	.00190	.03060	.00060
	GRADIENT	.00682	-.00572	-.00107	.00043	-.00033	-.00312	-.00005

MSFC 545 (1A1) MOD ATP LV-(01)/(T3)(S1/2)/(S1/2) (R72041) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1152/ 0 RN/L = 5.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.604	-5.000	-.15420	.13290	.01480	-.01270	.00750	.03720	.00740
.604	-4.000	-.12590	.11270	.01520	-.01300	.00730	.03680	.00830
.604	-2.000	-.05890	.06630	.01490	-.01270	.00750	.04020	.00660
.604	.000	.00480	.02150	.01640	-.01290	.00830	.04110	.00650
.604	2.000	.07710	-.02900	.01500	-.01170	.00780	.04310	.00430
.604	4.000	.14560	-.07840	.01320	-.00950	.00820	.04170	.00340
.604	6.000	.21780	-.13110	.01260	-.00910	.00840	.04150	.00140
.604	8.000	.28090	-.17720	.01440	-.01030	.00920	.03970	.00160
.604	10.000	.33480	-.21710	.01530	-.01060	.01000	.04190	-.00040
	GRADIENT	.03347	-.02353	-.00012	.00031	.00009	.00065	-.00051

RUN NO. 1151/ 0 RN/L = 6.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.904	-5.000	-.13600	.12720	.01730	-.01430	.00660	.03600	.02640
.904	-4.000	-.10450	.10470	.01690	-.01370	.00650	.03790	.02540
.904	-2.000	-.03710	.05720	.01820	-.01440	.00680	.03890	.02510
.904	.000	.03270	.00900	.01730	-.01340	.00710	.03930	.02530
.904	2.000	.10280	-.04100	.01530	-.01170	.00750	.04020	.02290
.904	4.000	.17500	-.09380	.01650	-.01230	.00840	.04060	.02000
.904	6.000	.24890	-.14710	.01650	-.01200	.00940	.04290	.01670
.904	8.000	.31100	-.19190	.01760	-.01220	.01060	.04530	.01630
.904	10.000	.36100	-.22970	.01690	-.01070	.01100	.04790	.01550
	GRADIENT	.03461	-.02450	-.00015	.00026	.00019	.00045	-.00061

RUN NO. 1149/ 0 RN/L = 6.53 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.001	-5.000	-.15940	.15400	.01370	-.01060	.00450	.04690	.02840
1.001	-4.000	-.12070	.12460	.01620	-.01270	.00580	.04750	.02550
1.001	-2.000	-.04590	.07150	.01640	-.01250	.00570	.04870	.02570
1.001	.000	.02970	.01830	.01610	-.01200	.00550	.05120	.02480
1.001	2.000	.10870	-.03920	.01640	-.01190	.00650	.05120	.02330
1.001	4.000	.19420	-.10370	.01780	-.01340	.00790	.05190	.01930
1.001	6.000	.27750	-.16710	.01980	-.01470	.00780	.05480	.01740
1.001	8.000	.33910	-.21630	.01990	-.01380	.00760	.05850	.01510
1.001	10.000	.37930	-.24960	.01740	-.01060	.00800	.06170	.01270
	GRADIENT	.03898	-.02822	.00030	-.00016	.00029	.00059	-.00081

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72041) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1150/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.202	-5.000	-.09280	.11880	.00840	-.00680	.00040	.05970	.03830
1.202	-4.000	-.05150	.08660	.01040	-.00780	.00170	.05960	.03880
1.202	-2.000	.04100	.01420	.01020	-.00760	.00260	.06550	.03480
1.202	.000	.12940	-.05430	.00880	-.00610	.00370	.07010	.03220
1.202	2.000	.21750	-.12100	.00890	-.00590	.00410	.07570	.02840
1.202	4.000	.29930	-.18110	.00760	-.00490	.00260	.07790	.02730
1.202	6.000	.36110	-.22610	.00820	-.00520	.00190	.08070	.02470
1.202	8.000	.39780	-.25390	.00960	-.00620	.00150	.08440	.02080
1.202	10.000	.42830	-.27750	.01180	-.00770	.00130	.08690	.01730
	GRADIENT	.04393	-.03369	-.00017	.00027	.00028	.00223	-.00138

RUN NO. 1183/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.07840	.10320	.00780	-.00670	.00010	.06630	.02610
1.460	-4.000	-.04220	.07540	.00970	-.00830	.00090	.06670	.02650
1.460	-2.000	.03480	.01620	.01070	-.00900	.00100	.06720	.02760
1.460	.000	.11060	-.04190	.01040	-.00810	.00130	.07170	.02560
1.460	2.000	.18280	-.09650	.01000	-.00750	.00170	.07640	.02270
1.460	4.000	.25830	-.15220	.00870	-.00610	.00190	.08030	.02090
1.460	6.000	.32600	-.20230	.00750	-.00490	.00210	.08240	.02040
1.460	8.000	.37650	-.23990	.00580	-.00360	.00200	.08470	.01950
1.460	10.000	.41210	-.26530	.00770	-.00470	.00140	.08630	.01860
	GRADIENT	.03745	-.02847	.00006	.00012	.00018	.00162	-.00063

RUN NO. 1215/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.956	-5.000	-.02450	.05710	.01240	-.00990	.00370	.07410	.01840
1.956	-4.000	.00570	.03170	.01090	-.00880	.00330	.07260	.01800
1.956	-2.000	.06670	-.01530	.01160	-.00910	.00350	.07150	.01760
1.956	.000	.12770	-.06260	.01180	-.00900	.00350	.06970	.01730
1.956	2.000	.18190	-.10350	.01130	-.00830	.00350	.07060	.01560
1.956	4.000	.24420	-.14710	.01110	-.00800	.00320	.07570	.01330
1.956	6.000	.30060	-.18800	.01130	-.00790	.00300	.07950	.01140
1.956	8.000	.33420	-.21320	.01220	-.00890	.00120	.07890	.01120
1.956	10.000	.33590	-.21420	.01390	-.01110	.00050	.07380	.01300
	GRADIENT	.02973	-.02263	-.00007	.00017	-.00003	.00003	-.00051

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72041) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 4.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1257/ 0 RN/L = 4.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.02130	.01950	.01040	-.00590	.00390	.07630	.00190
4.960	-4.000	-.01480	.01470	.00990	-.00570	.00390	.07330	.00180
4.960	-2.000	-.00100	.00470	.00930	-.00540	.00380	.06710	.00160
4.960	.000	.01110	-.00480	.00820	-.00470	.00330	.06110	.00150
4.960	2.000	.01930	-.01290	.00570	-.00330	.00220	.05560	.00150
4.960	4.000	.03300	-.02510	.00770	-.00450	.00270	.05140	.00080
4.960	6.000	.04880	-.03840	.00780	-.00490	.00290	.04840	.00020
4.960	8.000	.05930	-.04610	.00870	-.00540	.00280	.04370	.00000
4.960	10.000	.06270	-.04780	.00880	-.00560	.00300	.03650	-.00010
	GRADIENT	.00592	-.00485	-.00042	.00023	-.00018	-.00282	-.00010

MSFC 545 (IA1) MOD ATP LV-(01)/(T3)(S1/2)/(S1/2) (R72042) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT.	XMRP =	.0000	
LREF = 1328.0000 IN.	YMRP =	.0000	
BREF = 1328.0000 IN.	ZMRP =	.0000	
SCALE = 100.0000 PERCNT			

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2328/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.670	-.04840	.05560	.11270	-.07770	.04220	.02160	.02640
.601	-3.660	-.04380	.05410	.07630	-.05330	.03090	.02440	.02490
.601	-1.570	-.04170	.05450	.04220	-.03010	.02000	.02720	.02350
.601	.480	-.04530	.05770	.00440	-.00460	.00800	.02900	.02220
.601	2.550	-.05140	.06100	-.03290	.02110	-.00440	.02680	.02270
.601	4.580	-.05120	.06060	-.06980	.04720	-.01600	.02570	.02140
.601	6.610	-.05970	.06440	-.10670	.07190	-.02800	.02370	.02170
.601	.480	-.04400	.05610	.00440	-.00430	.00730	.02870	.02190
	GRADIENT	-.00119	.00095	-.01783	.01224	-.00574	.00011	-.00038

RUN NO. 2327/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.898	-5.800	-.01600	.04040	.12460	-.08680	.04650	.03050	.03580
.898	-3.730	-.01290	.03960	.08710	-.06170	.03450	.03200	.03430
.898	-1.610	-.01080	.03960	.04580	-.03260	.01950	.03290	.03420
.898	.470	-.01060	.04000	.00260	-.00230	.00440	.03480	.03300
.898	2.580	-.00890	.03850	-.03560	.02460	-.00870	.03370	.03270
.898	4.650	-.00790	.03610	-.07730	.05400	-.02360	.03280	.03300
.898	6.750	-.00910	.03490	-.11600	.08040	-.03630	.03010	.03300
.898	.470	-.00880	.03830	.00580	-.00490	.00540	.03480	.03230
	GRADIENT	.00057	-.00039	-.01958	.01378	-.00689	.00011	-.00020

RUN NO. 2325/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.001	-5.820	-.02110	.05400	.12210	-.08550	.04970	.04970	.03760
1.001	-3.740	-.02050	.05710	.07870	-.05450	.03350	.05300	.03700
1.001	-1.620	-.01980	.05750	.03690	-.02470	.01660	.05520	.03590
1.001	.470	-.01780	.05630	-.00320	.00340	.00040	.05670	.03380
1.001	2.600	-.01500	.05280	-.04460	.03230	-.01520	.05120	.03510
1.001	4.690	-.01310	.05020	-.08830	.06310	-.03180	.05180	.03390
1.001	6.780	-.01300	.04950	-.12970	.09150	-.04710	.05190	.03730
1.001	.480	-.01990	.05770	-.00520	.00410	.00020	.05690	.03420
	GRADIENT	.00093	-.00088	-.01971	.01386	-.00770	-.00030	-.00033

MSFC 545 (IA1) MOD ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72042) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2326/ 0 RN/L = 6.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.890	.02600	.02310	.11250	-.07280	.04680	.06140	.04100
1.198	-3.780	.02850	.02470	.07170	-.04610	.03080	.06360	.04040
1.198	-1.620	.03530	.02050	.03080	-.01960	.01410	.06440	.04060
1.198	.490	.03740	.01970	-.00440	.00260	-.00130	.06380	.04110
1.198	2.640	.04690	.01110	-.04070	.02590	-.01680	.06370	.04160
1.198	4.750	.05240	.00430	-.08170	.05250	-.03380	.06160	.04240
1.198	6.890	.05940	-.00380	-.12230	.07900	-.05030	.05940	.04360
1.198	.500	.04320	.01470	-.00650	.00370	-.00140	.06400	.04190
	GRADIENT	.00279	-.00235	-.01774	.01138	-.00751	-.00022	.00023

RUN NO. 2308/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.464	-5.930	.04140	.00900	.11810	-.07830	.04480	.06620	.03230
1.464	-3.800	.04950	.00500	.07530	-.05040	.02920	.06710	.03190
1.464	-1.620	.05500	.00210	.03260	-.02180	.01260	.06630	.03250
1.464	.500	.05630	.00110	-.00640	.00380	-.00260	.06680	.03190
1.464	2.660	.05620	-.00040	-.04910	.03270	-.01820	.06360	.03450
1.464	4.770	.05650	-.00290	-.09260	.06220	-.03410	.06210	.03580
1.464	6.930	.05590	-.00540	-.13620	.09020	-.04850	.05970	.03690
1.464	.480	.05470	.00000	-.00730	.00450	-.00250	.05780	.03190
	GRADIENT	.00071	-.00085	-.01949	.01306	-.00735	-.00059	.00046

RUN NO. 2303/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.974	-5.980	.06490	-.01820	.12090	-.07770	.03980	.06140	.02380
1.974	-3.820	.07550	-.02600	.07550	-.04900	.02500	.05910	.02340
1.974	-1.630	.08420	-.03040	.03360	-.02180	.01160	.05920	.02300
1.974	.500	.08730	-.03150	-.00670	.00470	-.00130	.05900	.02340
1.974	2.660	.08400	-.02860	-.04840	.03190	-.01510	.05970	.02410
1.974	4.810	.07920	-.02540	-.09190	.05940	-.02940	.06170	.02410
1.974	6.990	.07020	-.02070	-.13590	.08660	-.04370	.06070	.02530
1.974	.460	.08720	-.03190	-.00890	.00600	-.00180	.05860	.02350
	GRADIENT	.00034	.00014	-.01934	.01255	-.00629	.00026	.00012

MSFC 545 (IA1) MCO ATP LV-(O1)/(T3)(S1/2)/(S1/2) (R72042) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	4.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2292/ 0 RN/L = 4.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.570	-.00490	.00550	.06030	-.03770	.01790	.05760	.00290
4.960	-3.580	-.01530	.01080	.03670	-.02170	.01080	.05650	.00300
4.960	-1.540	-.01310	.01130	.01920	-.01050	.00570	.05770	.00310
4.960	.480	-.01240	.01080	-.00110	.00100	.00000	.05790	.00320
4.960	2.520	-.01060	.00960	-.02040	.01170	-.00520	.05680	.00320
4.960	4.550	-.00800	.00540	-.04070	.02380	-.01080	.05570	.00320
4.960	6.550	-.00260	.00380	-.06210	.03820	-.01720	.05670	.00320
4.960	.470	-.00990	.00940	-.00110	.00110	.00020	.05830	.00320
	GRADIENT	.00084	-.00062	-.00957	.00557	-.00266	-.00012	.00002

MSFC 545 (IA1) MOD ATP LV-(T3)/(O1) (R72101) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	11.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2136/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.01450	-.03860	.00060	-.00210	.00060	.00340	.02960
.601	-4.000	-.00860	-.03630	-.00230	-.00300	-.00050	.00240	.03040
.601	-2.000	-.00560	-.02360	-.00600	-.00020	-.00060	.00110	.03020
.601	.000	-.01580	-.00770	-.00890	.00130	-.00090	-.00070	.02990
.601	2.000	-.00760	.00330	-.00830	.00200	-.00070	-.00330	.02990
.601	4.000	-.00400	.01890	-.00470	.00270	.00000	-.00740	.03030
.601	6.000	.00210	.02650	-.00560	.00290	-.00050	-.00870	.03010
.601	8.000	.01360	.03120	.00200	.00120	.00010	-.01260	.03210
.601	10.000	.02200	.03940	.00330	.00150	-.00020	-.01600	.03090
	GRADIENT	.00066	.00654	-.00069	.00063	-.00005	-.00113	.00002

RUN NO. 2002/ 0 RN/L = 6.53 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.02160	-.03790	-.00690	.00000	-.00010	.01750	.03820
.899	-4.000	-.01610	-.03040	-.00610	.00000	.00010	.01600	.03790
.899	-2.000	-.00980	-.02090	-.00710	.00080	-.00020	.01130	.03920
.899	.000	-.00800	-.01180	-.00650	.00150	.00140	.00780	.04140
.899	2.000	-.00490	-.00040	-.00680	.00110	-.00060	.00810	.04010
.899	4.000	.00240	.00920	-.00580	.00160	.00000	.00960	.03820
.899	6.000	.00890	.01890	-.00100	.00090	.00030	.01210	.03600
.899	8.000	.01980	.02890	-.00060	.00180	.00020	.01010	.03630
.899	10.000	.03000	.03840	-.00080	.00350	.00000	.00670	.03540
	GRADIENT	.00236	.00513	.00006	.00018	-.00000	-.00100	.00013

RUN NO. 2003/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.03220	-.03020	-.00490	-.00060	-.00050	.03730	.04230
.997	-4.000	-.02280	-.02780	-.00310	-.00110	-.00030	.03700	.04340
.997	-2.000	-.00780	-.02240	-.00100	-.00150	.00000	.03850	.04090
.997	.000	-.00610	-.01060	-.00210	-.00050	.00000	.03670	.04280
.997	2.000	-.00340	.00210	-.00080	-.00070	.00000	.03210	.04610
.997	4.000	.00320	.01280	.00000	-.00070	.00000	.03180	.04590
.997	6.000	.01270	.02360	.00150	-.00050	.00020	.03550	.03910
.997	8.000	.02490	.03290	.00190	.00050	.00020	.03710	.04040
.997	10.000	.03630	.04180	.00080	.00220	-.00010	.03460	.03440
	GRADIENT	.00355	.00491	.00045	.00003	.00005	-.00069	.00044

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (R72101) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2001/ 1 RN/L = 7.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.206	-5.000	-.02750	-.03910	-.00530	-.00040	-.00010	.05740	.04750
1.206	-4.000	-.01800	-.03590	-.00390	-.00090	-.00020	.05540	.04810
1.206	-2.000	-.01000	-.02400	-.00340	-.00030	.00040	.05710	.04790
1.206	.000	-.03320	-.00040	-.00020	-.00110	.00000	.04470	.05800
1.206	2.000	-.00730	.00720	.00120	-.00170	.00080	.04010	.06050
1.206	4.000	-.00280	.01880	.00160	-.00140	.00000	.03440	.06110
1.206	6.000	.00500	.03280	.00400	-.00110	-.00010	.02920	.06180
1.206	8.000	.01030	.04550	-.00270	.00090	-.00070	.02320	.05830
1.206	10.000	.02360	.05590	-.00440	.00190	-.00060	.01740	.05360
	GRADIENT	.00200	.00683	.00081	-.00013	.00005	-.00270	.00179

RUN NO. 2166/ 0 RN/L = 6.52 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.02560	-.04200	-.00180	.00100	.00000	.05860	.04160
1.461	-4.000	-.02230	-.03570	-.00500	.00140	-.00010	.05170	.04630
1.461	-2.000	-.01490	-.02130	-.00330	.00060	.00000	.04760	.04670
1.461	.000	-.01190	-.00730	-.00480	.00120	.00000	.05000	.04520
1.461	2.000	-.00660	.00690	-.00380	.00120	.00000	.05230	.04330
1.461	4.000	-.00160	.02160	-.00260	.00190	-.00010	.05600	.03870
1.461	6.000	.00270	.03470	-.00490	.00450	-.00020	.05540	.03950
1.461	8.000	.01650	.05000	.00160	.00350	.00010	.05030	.04020
1.461	10.000	.03540	.06200	.00440	.00430	.00010	.04400	.04220
	GRADIENT	.00260	.00708	-.00000	.00007	-.00000	-.00005	-.00044

RUN NO. 2221/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.03830	-.03840	.00030	-.00120	.00000	.05740	.02520
1.954	-4.000	-.03100	-.03130	.00370	-.00130	.00000	.05460	.02700
1.954	-2.000	-.02490	-.01660	.00260	-.00110	-.00010	.04980	.03080
1.954	.000	-.02070	.00000	.00260	-.00100	-.00010	.04710	.03250
1.954	2.000	-.01630	.01690	.00490	-.00120	.00000	.04470	.03330
1.954	4.000	-.01110	.03290	.00400	-.00050	.00000	.04340	.03410
1.954	6.000	.00320	.04740	.00680	.00000	.00010	.03940	.03460
1.954	8.000	.01750	.06110	.00590	.00150	.00000	.03470	.03650
1.954	10.000	.04200	.07190	.00790	.00200	-.00020	.03120	.03770
	GRADIENT	.00279	.00798	.00032	.00006	.00000	-.00155	.00098

MSFC 545 (IA1) MOD ATP LV-(T3)/(O1) (R72101) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	11.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2263/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04860	-.01680	.02450	-.00440	.00290	.04150	.00350
4.960	-4.000	-.04940	-.01050	.02050	-.00270	.00210	.03980	.00370
4.960	-2.000	-.04370	.00060	.01420	.00000	.00100	.03720	.00410
4.960	.000	-.02870	.00980	.01030	.00150	.00050	.03560	.00460
4.960	2.000	-.00450	.01690	.00840	.00220	.00060	.03520	.00530
4.960	4.000	.01860	.02490	.00890	.00250	.00010	.03460	.00570
4.960	6.000	.04050	.03070	.00730	.00290	.00020	.03670	.00570
4.960	8.000	.06250	.03370	.00870	.00270	.00000	.03970	.00550
4.960	10.000	.09470	.03520	.01030	.00310	.00040	.04020	.00580
	GRADIENT	.00761	.00459	-.00178	.00076	-.00028	-.00075	.00025

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (R72102) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	11.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2035/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	.00140	-.04600	-.00210	-.00160	.00050	.00050	.03140
.600	-4.000	.00140	-.04140	-.00440	-.00140	.00000	-.00030	.03180
.600	-2.000	.00150	-.02810	-.00610	-.00030	.00000	-.00200	.03060
.600	.000	.00370	-.01650	-.00790	.00110	.00000	-.00440	.03140
.600	2.000	.00440	-.00370	-.00890	.00160	.00000	-.00590	.03110
.600	4.000	.00460	.01240	-.00790	.00310	.00050	-.01140	.03380
.600	6.000	.00570	.02490	-.00770	.00290	.00020	-.00960	.03070
.600	8.000	.01150	.03090	-.01030	.00730	.00100	-.00630	.02410
.600	10.000	.01990	.03690	-.01390	.00920	.00090	-.00780	.01890
	GRADIENT	.00042	.00643	-.00066	.00052	.00001	-.00122	.00017

RUN NO. 2034/ 0 RN/L = 6.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.00940	-.04400	-.00750	.00000	-.00020	.00790	.04280
.899	-4.000	-.00730	-.03770	-.00670	.00020	.00000	.00620	.04240
.899	-2.000	-.00100	-.02700	-.00600	.00040	.00000	.00180	.04310
.899	.000	.00170	-.01720	-.00660	.00110	.00010	.00070	.04190
.899	2.000	.00760	-.00680	-.00410	.00110	.00000	.00040	.03930
.899	4.000	.01110	.00350	-.00570	.00280	.00010	-.00040	.03680
.899	6.000	.02190	.01300	-.00460	.00270	.00020	-.00440	.03530
.899	8.000	.02740	.02230	-.00880	.00460	.00000	-.00930	.03030
.899	10.000	.03490	.03110	-.01150	.00690	.00000	-.01610	.02680
	GRADIENT	.00230	.00522	.00024	.00027	.00002	-.00090	-.00064

RUN NO. 2032/ 0 RN/L = 6.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.995	-5.000	-.01650	-.04090	-.00550	-.00050	-.00060	.03000	.04570
.995	-4.000	-.01020	-.03500	-.00350	-.00070	-.00020	.02670	.04920
.995	-2.000	-.00480	-.02430	-.00350	-.00070	-.00010	.02470	.04520
.995	.000	-.00200	-.01250	-.00440	.00010	.00000	.02280	.04340
.995	2.000	.00180	-.00180	-.00380	.00040	-.00010	.02250	.03930
.995	4.000	.00910	.00830	-.00350	.00120	-.00010	.02380	.03160
.995	6.000	.01680	.01860	-.00060	.00160	-.00010	.02920	.02800
.995	8.000	.02800	.02610	-.00590	.00350	.00000	.03240	.00970
.995	10.000	.03570	.03590	-.00440	.00460	.00010	.02290	.00040
	GRADIENT	.00252	.00549	.00011	.00020	.00004	-.00067	-.00162

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (R72102) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT.	XMRP =	.0000	
LREF = 1328.0000 IN.	YMRP =	.0000	
BREF = 1328.0000 IN.	ZMRP =	.0000	
SCALE = 100.0000 PERCNT			

PARAMETRIC DATA

BETA =	.000	CONFIG =	11.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2033/ 1 RN/L = 6.57 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.01090	-.04710	-.00380	-.00040	.00000	.04860	.05000
1.199	-4.000	-.00900	-.04090	-.00470	-.00050	-.00020	.04570	.05190
1.199	-2.000	-.00560	-.02650	-.00290	-.00070	.00000	.03950	.05570
1.199	.000	-.00400	-.01300	-.00350	-.00030	.00000	.03100	.05950
1.199	2.000	.00270	.00070	-.00440	-.00050	-.00060	.01840	.06010
1.199	4.000	.00600	.01440	-.00310	.00020	-.00010	.01070	.05800
1.199	6.000	.01280	.02880	-.00490	.00150	.00000	.00160	.05340
1.199	8.000	.01310	.04120	-.01890	.00540	-.00070	-.01040	.04120
1.199	10.000	.02340	.05440	-.02560	.00550	-.00050	-.02070	.02760
	GRADIENT	.00187	.00686	.00006	.00006	-.00003	-.00433	.00103

RUN NO. 2172/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.01950	-.04620	-.00350	.00150	.00000	.06140	.03880
1.461	-4.000	-.01360	-.03980	-.00260	.00080	.00000	.05600	.04150
1.461	-2.000	-.00800	-.02590	-.00260	.00070	-.00020	.04960	.04560
1.461	.000	-.00150	-.01230	-.00180	.00010	-.00040	.04870	.04560
1.461	2.000	.00230	.00240	.00200	-.00030	-.00010	.04680	.04660
1.461	4.000	.00370	.01630	.00130	-.00030	-.00070	.05030	.04180
1.461	6.000	.00810	.03160	.00060	.00160	-.00040	.05200	.03910
1.461	8.000	.01950	.04500	.00590	.00270	.00030	.05180	.03800
1.461	10.000	.03940	.05760	.00990	.00330	.00000	.04740	.03880
	GRADIENT	.00258	.00697	.00060	-.00019	-.00006	-.00123	.00042

RUN NO. 2220/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.04300	-.03300	.00060	-.00050	.00000	.05860	.02610
1.954	-4.000	-.03160	-.03140	.00060	-.00070	.00000	.05580	.02690
1.954	-2.000	-.01670	-.02100	.00210	-.00110	.00000	.05440	.02700
1.954	.000	-.00960	-.00520	.00360	-.00100	.00000	.05090	.02900
1.954	2.000	-.00590	.01040	.00360	-.00100	.00000	.04560	.03210
1.954	4.000	-.00040	.02650	.00180	-.00050	-.00020	.04420	.03270
1.954	6.000	.01180	.04190	.00370	.00070	.00000	.03930	.03500
1.954	8.000	.02390	.05550	.00320	.00230	.00000	.03540	.03630
1.954	10.000	.04860	.06690	.00620	.00280	.00010	.03190	.03780
	GRADIENT	.00447	.00682	.00025	-.00001	-.00002	-.00163	.00078

MSFC 545 (IA1) MOD ATP LV-(T3)/(O1) (R72102) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2262/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04430	-.03440	.00430	.00160	.00060	.04010	.00410
4.960	-4.000	-.04730	-.02300	.00450	.00160	.00040	.03940	.00410
4.960	-2.000	-.04420	-.00480	.00500	.00170	.00020	.03800	.00430
4.960	.000	-.02910	.00730	.00530	.00200	.00010	.03670	.00470
4.960	2.000	-.00160	.01300	.00510	.00250	.00000	.03570	.00520
4.960	4.000	.02410	.02320	.00840	.00170	.00020	.03510	.00560
4.960	6.000	.04450	.02880	.00810	.00240	.00020	.03730	.00560
4.960	8.000	.06760	.03370	.01140	.00250	.00040	.03920	.00550
4.960	10.000	.09810	.03390	.01140	.00260	.00060	.04060	.00570
	GRADIENT	.00779	.00619	.00035	.00005	-.00005	-.00057	.00017

MSFC 545 (IA1) MOD ATP LV-(T3)/(O1) (R72103) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2054/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.599	-5.000	-.01350	-.03660	-.00020	-.00250	.00000	.00480	.02950
.599	-4.000	-.01840	-.03290	-.00270	-.00220	-.00060	.00360	.03150
.599	-2.000	-.01240	-.01570	.00590	-.00400	.00000	.00020	.03240
.599	.000	-.01050	-.01210	.00330	-.00710	-.00030	-.00050	.03180
.599	2.000	-.00020	-.00080	.00400	-.00630	-.00090	-.00350	.03340
.599	4.000	.00340	.01200	.00210	-.00380	-.00110	-.00620	.03240
.599	6.000	.00800	.02180	.00160	-.00170	-.00060	-.00120	.02510
.599	8.000	.01170	.03060	.00280	-.00260	-.00100	-.00360	.02600
.599	10.000	.01830	.04030	.00420	-.00130	-.00100	-.00770	.02600
	GRADIENT	.00224	.00527	.00044	-.00033	-.00010	-.00118	.00028

RUN NO. 2055/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.03390	-.03280	-.01100	.00230	-.00030	.00250	.04640
.900	-4.000	-.02300	-.02890	-.00590	-.00010	-.00030	.00140	.04500
.900	-2.000	-.02120	-.01600	-.00290	.00050	-.00010	.00620	.04180
.900	.000	-.01420	-.00650	-.00500	.00000	.00000	.00700	.04000
.900	2.000	-.00890	.00490	-.00170	.00000	-.00020	.00730	.04020
.900	4.000	-.00760	.01460	-.00500	.00010	-.00060	.01270	.03820
.900	6.000	.00230	.02530	.00280	-.00050	.00030	.01920	.03590
.900	8.000	.01200	.03520	.00400	.00020	-.00010	.02220	.03690
.900	10.000	.02180	.04440	.00330	.00160	-.00020	.02330	.03710
	GRADIENT	.00271	.00536	.00057	-.00015	-.00002	.00108	-.00087

RUN NO. 2056/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.994	-5.000	-.02320	-.03490	-.00700	.00050	-.00030	.01530	.05230
.994	-4.000	-.02740	-.02490	-.00050	-.00220	.00020	.01440	.03690
.994	-2.000	-.02430	-.01360	-.00180	-.00150	.00010	.02070	.03440
.994	.000	-.01690	-.00290	-.00060	-.00080	.00040	.02680	.02950
.994	2.000	-.01110	.00840	-.00160	-.00080	.00000	.02990	.03070
.994	4.000	-.00230	.01710	.00410	-.00190	-.00020	.03440	.03150
.994	6.000	.00530	.02850	.00370	-.00200	.00060	.04010	.02860
.994	8.000	.01600	.03750	.00620	-.00140	.00040	.03860	.03880
.994	10.000	.02740	.04600	.00380	.00110	.00000	.04480	.03700
	GRADIENT	.00255	.00566	.00078	-.00009	-.00000	.00230	-.00183

MSFC 545 (IA1) MOD ATP LV-(T3)/(O1) (R72103) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	11.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2057/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.195	-5.000	-.03290	-.03540	-.00510	-.00090	-.00060	.03800	.05460
1.195	-4.000	-.02710	-.02660	-.00220	-.00210	.00000	.03670	.05450
1.195	-2.000	-.02630	-.01370	-.00410	-.00230	.00010	.03890	.05410
1.195	.000	-.03890	.00570	-.00240	-.00230	-.00040	.03860	.05860
1.195	2.000	-.01980	.01510	.00110	-.00270	.00050	.04280	.05830
1.195	4.000	-.01560	.02680	.00230	-.00290	-.00010	.04380	.05980
1.195	6.000	-.00470	.04020	.00940	-.00410	-.00020	.04040	.06420
1.195	8.000	.00510	.05070	.00780	-.00270	-.00030	.04270	.06370
1.195	10.000	.02210	.05940	.01100	-.00140	-.00030	.04010	.06600
	GRADIENT	.00147	.00698	.00074	-.00017	.00005	.00074	.00066

RUN NO. 2178/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.04960	-.03480	-.00940	.00160	-.00090	.05230	.04420
1.462	-4.000	-.03310	-.02760	-.00280	.00080	.00000	.04640	.04770
1.462	-2.000	-.03050	-.01400	-.00410	.00140	.00030	.04150	.05080
1.462	.000	-.02380	-.00110	-.00490	.00070	.00000	.04040	.05050
1.462	2.000	-.01630	.01360	-.00250	.00080	.00010	.04180	.04810
1.462	4.000	-.01390	.02800	-.00620	.00340	-.00020	.05060	.04010
1.462	6.000	-.00420	.04030	-.00500	.00520	.00000	.05520	.03700
1.462	8.000	.00460	.05720	-.00360	.00430	-.00020	.04880	.03740
1.462	10.000	.02130	.06890	-.00170	.00530	.00020	.04220	.04030
	GRADIENT	.00352	.00693	.00019	.00014	.00004	-.00027	-.00037

RUN NO. 2217/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.956	-5.000	-.04870	-.03280	-.00220	-.00120	-.00090	.05500	.02790
1.956	-4.000	-.04130	-.02410	.00510	-.00160	-.00010	.05410	.02840
1.956	-2.000	-.03450	-.00870	.00540	-.00160	-.00010	.04860	.03210
1.956	.000	-.03070	.00760	.00480	-.00130	.00000	.04510	.03330
1.956	2.000	-.02490	.02300	.00540	-.00080	.00000	.04270	.03360
1.956	4.000	-.02090	.04180	.00680	-.00060	.00020	.04030	.03500
1.956	6.000	-.01120	.05660	.00580	.00040	-.00020	.03840	.03490
1.956	8.000	.00500	.07110	.00780	.00190	-.00020	.03110	.03760
1.956	10.000	.02990	.08150	.00970	.00250	-.00020	.02800	.03780
	GRADIENT	.00291	.00816	.00064	.00009	.00008	-.00171	.00080

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (R72103) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	11.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2259/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.01590	-.00580	.06740	-.00690	.00180	.04000	.00460
4.960	-4.000	-.02940	-.00210	.04620	-.00470	.00070	.03860	.00440
4.960	-2.000	-.04110	.00540	.01640	-.00140	-.00020	.03580	.00420
4.960	.000	-.03070	.01340	.00590	.00010	.00000	.03340	.00450
4.960	2.000	.00760	.02230	.01970	-.00030	.00220	.03090	.00530
4.960	4.000	.02100	.02890	.01390	.00000	.00010	.03230	.00540
4.960	6.000	.03730	.03410	.00650	.00240	.00040	.03610	.00550
4.960	8.000	.06460	.03640	.00700	.00560	.00120	.03820	.00540
4.960	10.000	.10090	.03460	.00950	.00540	.00110	.03950	.00550
	GRADIENT	.00501	.00392	-.00523	.00073	-.00005	-.00097	.00011

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (R72104) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2123/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.03050	-.03770	-.02000	.00110	-.00060	.00860	.02280
.598	-4.000	-.01330	-.03180	-.00130	-.00220	.00020	.00360	.02570
.598	-2.000	-.01350	-.01810	-.00400	-.00110	.00020	.00480	.02210
.598	.000	-.01370	-.00630	-.00730	.00020	.00000	.00410	.02300
.598	2.000	-.01450	.00640	-.00910	.00210	.00000	.00090	.02410
.598	4.000	-.00910	.02020	-.00690	.00160	.00000	.00000	.02300
.598	6.000	-.00440	.03090	-.00480	.00230	.00000	-.00450	.02470
.598	8.000	.00830	.03810	-.00300	.00230	.00000	-.00780	.02470
.598	10.000	.01750	.04410	-.00350	.00430	.00000	-.01090	.02440
	GRADIENT	.00145	.00640	.00044	.00029	.00003	-.00077	-.00006

RUN NO. 2122/ 0 RN/L = 6.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.01580	-.03520	-.00420	-.00040	.00000	-.00680	.04510
.900	-4.000	-.02030	-.03180	-.00570	.00000	.00000	-.00400	.04330
.900	-2.000	-.01720	-.01940	-.00830	.00100	-.00050	-.00090	.04060
.900	.000	-.01080	-.00790	-.00690	.00110	-.00010	.00160	.03720
.900	2.000	-.00740	.00160	-.00680	.00080	-.00040	.00300	.03490
.900	4.000	.00170	.01200	-.00560	.00100	-.00030	.00340	.03270
.900	6.000	.00750	.02080	-.00360	.00150	-.00020	.00590	.03070
.900	8.000	.01610	.03030	-.00370	.00270	-.00010	.00650	.02890
.900	10.000	.02680	.04000	-.00270	.00400	-.00010	.00330	.02910
	GRADIENT	.00211	.00536	-.00011	.00014	-.00003	.00112	-.00139

RUN NO. 2120/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.02150	-.04060	-.00910	.00180	-.00170	.01140	.05590
.996	-4.000	-.01880	-.02960	-.00340	.00000	-.00050	.00820	.05600
.996	-2.000	-.01840	-.01470	-.00290	.00000	-.00050	.01700	.04690
.996	.000	-.01290	-.00430	-.00230	.00030	-.00010	.02080	.04270
.996	2.000	-.00780	.00480	-.00350	.00050	-.00050	.02360	.03960
.996	4.000	.00090	.01560	-.00200	.00070	-.00030	.02600	.03600
.996	6.000	.00970	.02550	.00020	.00090	-.00010	.02980	.03550
.996	8.000	.02020	.03480	-.00060	.00200	-.00020	.03190	.03020
.996	10.000	.03260	.04420	-.00010	.00330	-.00030	.02820	.02800
	GRADIENT	.00234	.00601	.00050	-.00004	.00010	.00192	-.00235

MSFC 545 (1A1) MOD ATP LV-(T3)/(01) (R72104) (22 FEB 73)

REFERENCE DATA

BREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	11.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2121/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.02180	-.04230	-.00650	.00140	.00000	.04130	.04960
1.197	-4.000	-.02520	-.03150	-.00790	.00080	-.00050	.03930	.05130
1.197	-2.000	-.01830	-.01790	-.00420	.00030	-.00020	.03910	.05130
1.197	.000	-.01770	-.00320	-.00290	.00010	.00000	.03950	.05160
1.197	2.000	-.01110	.00930	-.00190	-.00040	.00010	.03600	.05190
1.197	4.000	-.00500	.02200	-.00040	-.00040	-.00020	.03240	.05240
1.197	6.000	.00320	.03440	-.00010	.00050	-.00020	.02880	.05220
1.197	8.000	.00910	.04710	-.00420	.00280	-.00060	.02310	.05030
1.197	10.000	.02190	.05810	-.00600	.00410	-.00050	.01690	.04680
	GRADIENT	.00200	.00702	.00078	-.00019	.00002	-.00083	.00024

RUN NO. 2196/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.03370	-.03920	-.00360	.00070	-.00050	.05560	.04290
1.463	-4.000	-.02530	-.03270	-.00150	.00040	-.00020	.05450	.04210
1.463	-2.000	-.01910	-.01940	-.00250	.00010	-.00030	.05120	.04420
1.463	.000	-.01450	-.00520	-.00240	.00020	-.00030	.04640	.04740
1.463	2.000	-.00690	.00800	-.00080	.00020	-.00010	.04190	.04990
1.463	4.000	-.00180	.02240	-.00040	.00120	-.00010	.04150	.04860
1.463	6.000	.00540	.03590	-.00080	.00280	-.00010	.04210	.04740
1.463	8.000	.01550	.05020	.00160	.00410	.00000	.04200	.04640
1.463	10.000	.03200	.06360	.00370	.00510	.00000	.03860	.04580
	GRADIENT	.00333	.00684	.00027	.00004	.00003	-.00174	.00086

RUN NO. 2222/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.04200	-.03450	.00060	-.00110	-.00010	.05330	.03110
1.954	-4.000	-.03540	-.02740	.00320	-.00120	-.00010	.05010	.03180
1.954	-2.000	-.02870	-.01170	.00420	-.00130	.00000	.04930	.03170
1.954	.000	-.02110	.00420	.00380	-.00080	.00000	.04530	.03280
1.954	2.000	-.01580	.01980	.00370	-.00080	-.00030	.04070	.03440
1.954	4.000	-.00860	.03510	.00420	-.00040	.00000	.03730	.03580
1.954	6.000	.00230	.05030	.00500	.00050	.00000	.03340	.03690
1.954	8.000	.01850	.06350	.00530	.00160	.00000	.02920	.03840
1.954	10.000	.04430	.07380	.00690	.00260	-.00010	.02570	.03950
	GRADIENT	.00356	.00778	.00027	.00008	-.00000	-.00172	.00050

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (R72104) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	11.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2264/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.10000	-.02190	-.01670	.00200	-.00360	.04760	.00230
4.960	-4.000	-.08080	-.01420	-.00740	.00170	-.00210	.04350	.00310
4.960	-2.000	-.04640	-.00050	.00630	.00130	.00010	.03730	.00450
4.960	.000	-.02120	.01070	.01170	.00140	.00100	.03410	.00540
4.960	2.000	-.01010	.01920	.00480	.00250	.00000	.03440	.00560
4.960	4.000	.02060	.02550	.01290	.00170	.00120	.03460	.00570
4.960	6.000	.03970	.03210	.01100	.00310	.00070	.03750	.00590
4.960	8.000	.07630	.03500	.01430	.00260	.00100	.03610	.00570
4.960	10.000	.09810	.03590	.01270	.00320	.00110	.03930	.00570
	GRADIENT	.01282	.00532	.00282	.00002	.00046	-.00142	.00038

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (R72105) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2098/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.604	-5.000	-.01420	-.04280	-.01670	.00140	-.00020	.00590	.02530
.604	-4.000	-.00360	-.03670	-.00370	-.00070	.00010	.00320	.02850
.604	-2.000	-.00310	-.02240	-.00600	-.00080	-.00010	.00120	.02770
.604	.000	.00370	-.01380	-.00870	.00110	.00010	.00110	.02430
.604	2.000	-.00620	.00340	-.01130	.00390	-.00050	-.00160	.02650
.604	4.000	.00850	.01400	.00120	.00070	.00000	.00040	.02300
.604	6.000	.01090	.02540	-.00220	.00100	-.00010	-.00380	.02480
.604	8.000	.01360	.03620	.00040	.00220	.00000	-.00700	.02480
.604	10.000	.02140	.04260	-.00500	.00520	.00000	-.00990	.02350
	GRADIENT	.00167	.00635	.00090	.00021	-.00001	-.00062	-.00035

RUN NO. 2099/ 0 RN/L = 6.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.01410	-.03940	-.00500	-.00010	-.00010	-.00570	.04930
.899	-4.000	-.01400	-.03560	-.00580	.00000	-.00010	-.00480	.04870
.899	-2.000	-.01030	-.02220	-.00570	.00070	-.00020	-.00020	.04490
.899	.000	-.00410	-.01220	-.00590	.00080	-.00050	.00240	.04130
.899	2.000	.00000	-.00160	-.00430	.00170	.00000	.00350	.03870
.899	4.000	.00530	.00820	-.00400	.00190	.00010	.00600	.03430
.899	6.000	.01360	.01770	-.00460	.00200	.00010	.00670	.03160
.899	8.000	.02110	.02740	-.00390	.00340	-.00010	.00530	.02860
.899	10.000	.03090	.03690	-.00340	.00510	-.00010	.00060	.02660
	GRADIENT	.00226	.00539	.00015	.00023	.00002	.00132	-.00168

RUN NO. 2100/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.01250	-.04300	-.00670	.00060	-.00110	.00150	.06360
.996	-4.000	-.01360	-.03160	-.00340	-.00050	-.00040	.00350	.06130
.996	-2.000	-.01600	-.01680	-.00550	.00010	-.00040	.01380	.04980
.996	.000	-.00880	-.00680	-.00440	.00070	-.00010	.01630	.04830
.996	2.000	-.00220	.00220	-.00510	.00070	-.00030	.01950	.04530
.996	4.000	.00490	.01120	-.00410	.00160	.00000	.02300	.03910
.996	6.000	.01300	.02260	-.00050	.00100	.00000	.02660	.03360
.996	8.000	.02360	.03180	-.00100	.00240	-.00010	.03020	.01900
.996	10.000	.03260	.04080	-.00230	.00470	-.00010	.02770	.01440
	GRADIENT	.00204	.00581	.00012	.00015	.00009	.00241	-.00262

MSFC 545 (IA1) MOD ATP LV-(T3)/(O1) (R72105) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2101/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.01600	-.04300	-.00090	-.00050	.00040	.04160	.05060
1.197	-4.000	-.01780	-.03370	-.00450	-.00100	-.00030	.04260	.05010
1.197	-2.000	-.01040	-.02080	-.00300	-.00030	.00000	.04320	.04960
1.197	.000	-.00960	-.00730	-.00370	.00000	-.00020	.04020	.05120
1.197	2.000	-.00450	.00510	-.00270	-.00030	-.00020	.03280	.05240
1.197	4.000	.00240	.01770	-.00070	-.00030	.00000	.02810	.05110
1.197	6.000	.01160	.03060	.00040	.00030	.00000	.02050	.04900
1.197	8.000	.01550	.04300	-.00710	.00350	-.00020	.00950	.04310
1.197	10.000	.02700	.05530	-.01220	.00500	-.00020	-.00100	.03550
	GRADIENT	.00207	.00664	.00012	.00005	-.00002	-.00158	.00018

RUN NO. 2190/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.469	-5.000	-.02710	-.04220	-.00310	.00110	-.00010	.05530	.04270
1.469	-4.000	-.01690	-.03550	-.00010	.00010	.00000	.05480	.04180
1.469	-2.000	-.00840	-.02240	.00140	-.00050	.00000	.05140	.04340
1.469	.000	-.00170	-.00910	.00100	.00020	.00010	.04830	.04730
1.469	2.000	.00330	.00430	.00230	-.00050	.00000	.04450	.04890
1.469	4.000	.00530	.01720	.00120	.00020	-.00020	.03890	.05270
1.469	6.000	.01230	.03170	.00070	.00190	-.00030	.03950	.04940
1.469	8.000	.02150	.04580	.00180	.00360	-.00020	.04050	.04680
1.469	10.000	.03700	.05950	.00500	.00480	-.00020	.03910	.04470
	GRADIENT	.00345	.00661	.00041	-.00008	-.00001	-.00180	.00118

RUN NO. 2219/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.951	-5.000	-.02760	-.04320	.00090	-.00090	-.00010	.05280	.03130
1.951	-4.000	-.02600	-.03370	.00140	-.00090	-.00010	.05130	.03150
1.951	-2.000	-.02320	-.01610	.00130	-.00080	-.00020	.05010	.03240
1.951	.000	-.01380	-.00100	.00260	-.00090	-.00010	.04740	.03250
1.951	2.000	-.00750	.01480	.00350	-.00060	.00000	.04190	.03410
1.951	4.000	.00020	.02860	.00280	.00000	.00000	.03910	.03490
1.951	6.000	.00960	.04500	.00340	.00040	-.00020	.03410	.03680
1.951	8.000	.02390	.05830	.00220	.00220	-.00030	.03100	.03780
1.951	10.000	.04860	.06970	.00470	.00310	-.00020	.02740	.03910
	GRADIENT	.00317	.00797	.00026	.00008	.00001	-.00154	.00040

MSFC 545 (IA1) MOD ATP LV-(T3)/(O1) (R72105) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2261/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.07270	-.01570	.00150	.00110	-.00070	.04340	.00430
4.960	-4.000	-.06420	-.01010	.00390	.00110	-.00030	.04030	.00430
4.960	-2.000	-.04340	-.00010	.00810	.00110	.00030	.03590	.00450
4.960	.000	-.01990	.00840	.01010	.00120	.00050	.03410	.00480
4.960	2.000	.00470	.01550	.00810	.00180	.00000	.03590	.00530
4.960	4.000	.02460	.02380	.01200	.00180	.00090	.03470	.00550
4.960	6.000	.04950	.02660	.00770	.00320	.00090	.03700	.00570
4.960	8.000	.07010	.03380	.01190	.00170	.00070	.03750	.00570
4.960	10.000	.09650	.03540	.01110	.00260	.00060	.04040	.00570
	GRADIENT	.01105	.00433	.00101	.00009	.00014	-.00086	.00014

MSFC 545 (IA1) MOD ATP LV-(T3)/(O1) (R72106) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2079/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.00970	-.04080	-.00160	-.00030	.00070	.00490	.02480
.601	-4.000	-.01590	-.03330	-.00380	-.00130	.00000	.00250	.02770
.601	-2.000	-.01050	-.01950	-.00120	-.00130	.00030	.00040	.02770
.601	.000	-.00580	-.01140	-.00130	-.00250	.00010	-.00090	.02740
.601	2.000	-.00270	.00130	-.00180	-.00240	-.00020	-.00280	.02720
.601	4.000	-.00260	.01510	-.00330	-.00110	-.00050	-.00470	.02710
.601	6.000	.00220	.02600	-.00120	.00000	-.00010	-.00300	.02330
.601	8.000	.00940	.03400	-.00130	.00020	-.00030	-.00690	.02460
.601	10.000	.01680	.04270	-.00060	.00160	-.00030	-.01110	.02520
	GRADIENT	.00128	.00601	-.00003	-.00012	-.00010	-.00099	.00012

RUN NO. 2078/ 0 RN/L = 6.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.03550	-.03090	-.00990	.00100	-.00020	.00390	.04390
.903	-4.000	-.02960	-.02610	-.00650	.00050	.00000	.00280	.04270
.903	-2.000	-.02490	-.01440	-.00610	.00130	.00000	.00430	.04000
.903	.000	-.01810	-.00470	-.00670	.00100	.00000	.00530	.03730
.903	2.000	-.01200	.00630	-.00370	.00060	-.00010	.00640	.03500
.903	4.000	-.00690	.01600	-.00400	.00040	-.00030	.00850	.03320
.903	6.000	.00010	.02570	.00010	.00020	.00000	.01270	.03140
.903	8.000	.01080	.03510	.00080	.00110	.00000	.01360	.03200
.903	10.000	.02070	.04450	.00040	.00270	-.00020	.01280	.03280
	GRADIENT	.00309	.00525	.00055	-.00005	-.00001	.00055	-.00122

RUN NO. 2077/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.02890	-.03160	-.00350	-.00060	.00000	.01590	.06380
.997	-4.000	-.02970	-.02520	-.00320	-.00070	-.00010	.01590	.05530
.997	-2.000	-.02560	-.01310	-.00320	-.00090	-.00010	.01760	.05030
.997	.000	-.01960	-.00200	-.00320	.00000	-.00010	.02170	.04470
.997	2.000	-.01300	.00950	-.00200	-.00020	-.00020	.02440	.04170
.997	4.000	-.00420	.01900	.00100	-.00060	-.00020	.02830	.03860
.997	6.000	.00410	.02990	.00220	-.00070	.00010	.03170	.03720
.997	8.000	.01500	.03880	.00310	.00020	.00000	.03180	.04060
.997	10.000	.02790	.04810	.00230	.00210	-.00030	.03240	.03990
	GRADIENT	.00281	.00565	.00041	.00004	-.00002	.00143	-.00259

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (R72106) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2076/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.03600	-.03640	-.00410	.00010	-.00060	.04080	.05440
1.199	-4.000	-.03170	-.02860	-.00330	.00010	-.00010	.03980	.05360
1.199	-2.000	-.02650	-.01500	-.00310	-.00050	.00000	.04020	.05210
1.199	.000	-.03070	.00200	-.00210	-.00060	-.00020	.03970	.05340
1.199	2.000	-.01830	.01360	.00050	-.00120	.00030	.03970	.05340
1.199	4.000	-.01370	.02560	.00070	-.00110	-.00020	.03900	.05430
1.199	6.000	-.00520	.03910	.00510	-.00140	-.00030	.03680	.05640
1.199	8.000	.00460	.05060	.00410	.00000	-.00050	.03550	.05750
1.199	10.000	.01970	.06030	.00540	.00140	-.00050	.03250	.05870
	GRADIENT	.00226	.00696	.00056	-.00015	.00004	-.00015	.00002

RUN NO. 2184/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.04310	-.03440	-.00460	.00130	-.00050	.05360	.04510
1.462	-4.000	-.03340	-.02790	-.00320	.00110	-.00010	.04930	.04650
1.462	-2.000	-.02760	-.01430	-.00320	.00080	.00000	.04320	.04900
1.462	.000	-.02190	-.00060	-.00300	.00050	-.00010	.03940	.05030
1.462	2.000	-.01540	.01370	-.00140	.00050	.00000	.03720	.05040
1.462	4.000	-.01130	.02810	-.00360	.00240	-.00020	.04150	.04580
1.462	6.000	-.00330	.04120	-.00360	.00430	-.00010	.04410	.04410
1.462	8.000	.00700	.05710	-.00130	.00420	-.00010	.04070	.04330
1.462	10.000	.02340	.06970	.00020	.00540	.00000	.03590	.04440
	GRADIENT	.00330	.00695	.00015	.00006	.00002	-.00150	.00023

RUN NO. 2218/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.955	-5.000	-.05080	-.02870	-.00040	-.00130	-.00050	.05320	.03070
1.955	-4.000	-.04470	-.02130	.00310	-.00100	.00000	.05100	.03130
1.955	-2.000	-.03660	-.00650	.00340	-.00100	-.00010	.04620	.03340
1.955	.000	-.03130	.00990	.00330	-.00080	.00000	.04200	.03450
1.955	2.000	-.02470	.02510	.00390	-.00040	.00000	.03830	.03540
1.955	4.000	-.01960	.04240	.00450	-.00020	.00000	.03550	.03670
1.955	6.000	-.00850	.05700	.00440	.00080	.00000	.03290	.03680
1.955	8.000	.00860	.07060	.00570	.00220	-.00010	.02720	.03890
1.955	10.000	.03520	.08040	.00770	.00300	-.00020	.02420	.03930
	GRADIENT	.00337	.00787	.00039	.00011	.00004	-.00200	.00066

MSFC 545 (1A1) MOD ATP LV-(T3)/(01) (R72106) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	11.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 2260/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.04600	-.01180	.03170	-.00400	.00060	.03810	.00390
4.960	-4.000	-.04820	-.00670	.02290	-.00230	.00030	.03730	.00410
4.960	-2.000	-.04400	.00270	.01050	.00020	.00010	.03580	.00440
4.960	.000	-.02730	.01150	.00620	.00160	.00030	.03430	.00480
4.960	2.000	.00490	.01950	.01200	.00160	.00130	.03270	.00530
4.960	4.000	.02320	.02780	.01250	.00110	.00040	.03310	.00540
4.960	6.000	.04070	.03120	.00620	.00270	.00000	.03560	.00540
4.960	8.000	.06770	.03510	.00650	.00370	.00040	.03680	.00550
4.960	10.000	.09760	.03600	.00810	.00390	.00060	.03900	.00560
	GRADIENT	.00820	.00438	-.00193	.00057	.00004	-.00062	.00018

MSFC 545 (IA1) MOD ATP LV-(T3)/(O1) (R72107) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1321/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.640	.00960	-.02350	.05090	.02160	-.00050	.02620	.00950
.602	-3.620	.00530	-.01940	.03570	.01110	-.00040	.02620	.00610
.602	-1.550	-.00330	-.01490	.01270	.00640	-.00040	.02300	.00990
.602	.490	-.00080	-.01350	-.00340	-.00260	.00000	.02430	.00830
.602	2.550	.00610	-.01380	-.01870	-.01210	.00020	.02350	.00810
.602	4.600	.00390	-.01480	-.04080	-.01960	-.00080	.02130	.01060
.602	6.620	.01540	-.02020	-.05810	-.02730	-.00010	.02000	.01310
.602	.490	-.00080	-.01460	-.00470	-.00190	-.00070	.02290	.00980
	GRADIENT	.00032	.00050	-.00898	-.00389	-.00001	-.00045	.00035

RUN NO. 1322/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.770	.00500	-.01560	.08790	.00160	-.00010	.01570	.03810
.903	-3.700	-.00480	-.01170	.05710	.00040	-.00020	.02000	.03200
.903	-1.590	-.00930	-.00810	.02740	-.00050	-.00020	.02210	.02830
.903	.480	-.01240	-.00630	-.00010	-.00230	-.00040	.02300	.02730
.903	2.580	-.00750	-.00710	-.02690	-.00360	-.00010	.02080	.02980
.903	4.670	-.00410	-.00900	-.05740	-.00450	-.00030	.02040	.03120
.903	6.740	.00040	-.01360	-.08970	-.00490	-.00030	.01850	.03830
.903	.480	-.00980	-.00590	.00190	-.00270	.00000	.02040	.02790
	GRADIENT	.00015	.00031	-.01355	-.00062	-.00000	-.00002	-.00001

RUN NO. 1324/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.790	.00270	-.01540	.08470	.00430	-.00030	.03660	.05110
1.000	-3.710	-.00410	-.01160	.05390	.00220	-.00030	.03830	.04900
1.000	-1.600	-.00840	-.00800	.02630	-.00040	-.00010	.03530	.04880
1.000	.490	-.00900	-.00590	-.00240	-.00170	-.00030	.03810	.04500
1.000	2.610	-.00620	-.00750	-.03210	-.00350	.00000	.03620	.04290
1.000	4.690	-.00220	-.01090	-.06410	-.00520	-.00040	.03840	.04950
1.000	6.790	.00400	-.01390	-.09920	-.00600	-.00040	.03570	.05420
1.000	.500	-.01400	-.00520	-.00610	-.00100	-.00050	.02880	.04720
	GRADIENT	.00028	.00009	-.01401	-.00085	-.00000	.00005	-.00023

MSFC 545 (IA1) MOD ATP LV-(T3)/(01) (R72107) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT.	XMRP = .0000		
LREF = 1328.0000 IN.	YMRP = .0000		
BREF = 1328.0000 IN.	ZMRP = .0000		
SCALE = 100.0000 PERCNT			

PARAMETRIC DATA

ALPHA = .000	CONFIG = 11.000		
RUDDER = .000	AILRON = .000		
ORBINC = .000	DELTAZ = .120		
RUDFLR = 10.000	ELEVTR = .000		

RUN NO. 1323/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.840	-.00620	-.01230	.07990	.01010	-.00030	.05070	.05260
1.198	-3.740	-.01040	-.00760	.05240	.00590	-.00040	.05190	.04830
1.198	-1.610	-.01580	-.00350	.02510	.00090	-.00010	.05310	.04690
1.198	.500	-.01580	-.00330	-.00220	-.00310	-.00050	.05260	.04600
1.198	2.630	-.01470	-.00500	-.03070	-.00710	-.00030	.05240	.04540
1.198	4.730	-.01160	-.00690	-.06030	-.01120	-.00050	.05110	.04860
1.198	6.830	-.00190	-.01020	-.09200	-.01330	-.00030	.05000	.05370
1.198	.500	-.01910	-.00330	-.00440	-.00250	-.00040	.05400	.04500
	GRADIENT	-.00006	-.00000	-.01328	-.00199	-.00002	-.00011	-.00004

RUN NO. 1309/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.464	-5.830	-.00360	-.01190	.07880	.01120	-.00030	.06080	.03930
1.464	-3.760	-.01220	-.00760	.04710	.00700	-.00050	.06250	.03320
1.464	-1.590	-.01330	-.00510	.01950	.00210	-.00030	.06240	.03140
1.464	.510	-.01440	-.00350	-.00740	-.00220	-.00040	.06210	.03010
1.464	2.650	-.01030	-.00440	-.03280	-.00790	-.00030	.06240	.03150
1.464	4.750	-.00530	-.00820	-.06390	-.01110	-.00020	.06260	.03530
1.464	6.890	.00260	-.01200	-.09920	-.01290	-.00040	.06100	.04080
1.464	.480	-.01220	-.00300	-.00470	-.00270	.00000	.06080	.03060
	GRADIENT	.00079	-.00002	-.01290	-.00217	.00003	.00001	.00020

RUN NO. 1302/ 0 RN/L = 6.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.956	-5.890	-.01560	-.00520	.08420	.01110	-.00060	.05960	.02710
1.956	-3.770	-.01790	-.00120	.05120	.00870	-.00020	.05910	.02420
1.956	-1.590	-.02030	.00130	.02180	.00380	-.00050	.05990	.02210
1.956	.510	-.02170	.00210	-.00710	-.00080	-.00040	.06090	.02160
1.956	2.650	-.02080	.00070	-.03540	-.00580	-.00020	.06090	.02270
1.956	4.780	-.01810	-.00040	-.06740	-.00990	-.00030	.06160	.02500
1.956	6.920	-.01450	-.00120	-.10480	-.01120	-.00020	.05950	.02940
1.956	.510	-.02080	.00150	-.00710	-.00130	-.00050	.06020	.02150
	GRADIENT	-.00004	.00005	-.01380	-.00219	.00000	.00028	.00010

MSFC 545 (1A1) MOD ATP LV-(T3)/(01) (R72107) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 11.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1293/ 0 RN/L = 4.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.620	-.02270	.01140	.07840	.01190	.00010	.04120	.00440
4.960	-3.610	-.01830	.00940	.04900	.00980	-.00050	.03800	.00440
4.960	-1.530	-.01710	.01320	.02450	.00380	-.00040	.03650	.00440
4.960	.480	-.01630	.01300	-.00010	-.00360	.00000	.03540	.00450
4.960	2.550	-.01580	.01060	-.03610	-.00780	-.00120	.03640	.00480
4.960	4.560	-.02060	.01490	-.06040	-.01030	.00050	.03880	.00470
4.960	6.600	-.01950	.01550	-.09140	-.01270	.00000	.03920	.00470
4.960	.490	-.01660	.01070	-.00660	-.00230	-.00050	.03590	.00450
	GRADIENT	-.00016	.00041	-.01368	-.00254	.00006	.00007	.00005

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72108) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2134/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.603	-5.000	-.13630	-.05810	-.00930	-.00150	-.00200	.08880	.07360
.603	-4.000	-.11070	-.04890	.00040	-.00300	-.00050	.08790	.07330
.603	-2.000	-.06520	-.03470	-.00360	-.00220	-.00090	.08370	.07500
.603	.000	-.02070	-.02100	-.00490	-.00210	-.00180	.08580	.06820
.603	2.000	.02480	-.00660	.00090	-.00330	-.00130	.07750	.07100
.603	4.000	.06570	.00460	-.00060	-.00120	.00140	.07620	.06860
.603	6.000	.11140	.01740	-.00470	.00090	-.00020	.07060	.06990
.603	8.000	.16580	.02990	-.00760	.00320	-.00030	.06300	.07130
.603	10.000	.23080	.03850	-.00710	.00580	.00040	.05670	.07080
	GRADIENT	.02244	.00696	.00061	.00002	.00021	-.00142	-.00060

RUN NO. 2135/ 0 RN/L = 5.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.803	-5.000	-.16370	-.04500	-.00720	-.00090	-.00060	.08930	.08550
.803	-4.000	-.14000	-.03520	-.00570	-.00170	-.00090	.08910	.08540
.803	-2.000	-.09420	-.01900	-.00450	-.00170	-.00080	.09090	.08270
.803	.000	-.05150	.00020	-.00440	-.00140	-.00120	.08550	.08010
.803	2.000	-.00260	.00990	-.00180	-.00110	-.00080	.08170	.07820
.803	4.000	.04810	.01790	-.00140	-.00050	-.00090	.07840	.07900
.803	6.000	.11060	.02800	-.00190	.00100	-.00090	.07550	.07800
.803	8.000	.16630	.03860	-.00180	.00290	-.00040	.07000	.07840
.803	10.000	.23450	.04390	-.00060	.00490	.00030	.06440	.07800
	GRADIENT	.02330	.00716	.00062	.00007	-.00002	-.00129	-.00087

RUN NO. 2005/ 1 RN/L = 6.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.17540	-.04110	-.01280	.00360	.00030	.10980	.09420
.902	-4.000	-.15180	-.03000	-.00870	.00390	.00000	.10850	.09500
.902	-2.000	-.10240	-.01280	-.00740	.00260	-.00030	.10880	.09200
.902	.000	-.04890	-.00290	-.00240	.00090	-.00070	.10630	.08770
.902	2.000	.00810	.00240	.00000	-.00010	-.00120	.10240	.08780
.902	4.000	.06480	.00940	.00260	-.00010	-.00080	.09830	.08720
.902	6.000	.12170	.01870	.00190	.00070	-.00060	.09520	.08370
.902	8.000	.18560	.02610	.00270	.00170	-.00030	.08960	.08280
.902	10.000	.26110	.02690	.00160	.00390	.00010	.08050	.08320
	GRADIENT	.02674	.00544	.00165	-.00050	-.00014	-.00122	-.00094

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72108) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2007/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.17030	-.03540	-.00940	.00470	.00110	.13480	.08760
.999	-4.000	-.15210	-.02530	-.01080	.00430	.00030	.13280	.08580
.999	-2.000	-.09890	-.00930	-.00520	.00260	.00000	.13780	.08740
.999	.000	-.05100	.00610	-.00090	.00020	-.00010	.13430	.08500
.999	2.000	.00300	.01320	.00350	-.00140	-.00010	.12890	.08500
.999	4.000	.06080	.01740	.00350	-.00180	-.00070	.12590	.08390
.999	6.000	.12860	.02000	.00420	-.00150	-.00060	.11970	.08030
.999	8.000	.20850	.01740	.00680	-.00090	-.00020	.10970	.08180
.999	10.000	.29410	.01340	.00870	.00060	.00040	.09910	.08750
	GRADIENT	.02575	.00600	.00173	-.00080	-.00015	-.00094	-.00035

RUN NO. 2006/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.16030	-.07320	-.01190	.00650	.00030	.16680	.09020
1.198	-4.000	-.13470	-.06060	-.01050	.00600	.00010	.16520	.09290
1.198	-2.000	-.08820	-.03280	-.00340	.00360	.00000	.16430	.09510
1.198	.000	-.04600	-.00360	-.00160	.00180	-.00040	.16100	.09610
1.198	2.000	-.00610	.01800	-.00070	.00150	-.00090	.15360	.09610
1.198	4.000	.03740	.04250	.00390	.00000	-.00100	.15020	.09500
1.198	6.000	.09160	.05620	.00490	.00000	-.00090	.14640	.09570
1.198	8.000	.16420	.06160	.00600	.00060	-.00080	.13890	.09660
1.198	10.000	.25000	.06070	.00710	.00290	-.00020	.13060	.09700
	GRADIENT	.02174	.01296	.00168	-.00073	-.00015	-.00188	.00050

RUN NO. 2164/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.16560	-.06960	-.00660	.00640	-.00140	.16290	.08110
1.460	-4.000	-.14530	-.05410	-.00850	.00670	-.00190	.16310	.08070
1.460	-2.000	-.11020	-.02230	-.00920	.00480	-.00270	.16500	.08060
1.460	.000	-.06690	.00060	-.00210	.00230	-.00220	.16910	.07880
1.460	2.000	-.03140	.03410	-.00180	.00330	-.00190	.17110	.07640
1.460	4.000	.01040	.05760	-.00110	.00270	-.00200	.17270	.07540
1.460	6.000	.06310	.07740	.00150	.00260	-.00150	.17470	.07410
1.460	8.000	.12480	.09480	.00610	.00420	-.00050	.17620	.07360
1.460	10.000	.20540	.10310	.01000	.00620	.00050	.17270	.07550
	GRADIENT	.01947	.01418	.00087	-.00048	-.00003	.00119	-.00067

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72108) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2209/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-5.000	-.22440	-.02690	.00390	-.00300	-.00140	.16510	.04570
1.962	-4.000	-.19470	-.01410	.00320	-.00280	-.00150	.16620	.04710
1.962	-2.000	-.14440	.01490	.00550	-.00230	-.00110	.16770	.05010
1.962	.000	-.10330	.04300	.00370	-.00240	-.00150	.16460	.05240
1.962	2.000	-.05860	.06600	.00500	-.00160	-.00100	.15860	.05440
1.962	4.000	-.00560	.08180	.00580	-.00200	-.00030	.15800	.05480
1.962	6.000	.05620	.10140	.00580	-.00020	.00020	.15750	.05730
1.962	8.000	.14490	.10230	.01030	.00100	.00130	.15720	.05550
1.962	10.000	.25510	.09260	.01570	.00200	.00200	.15630	.05480
	GRADIENT	.02368	.01245	.00021	.00013	.00010	-.00098	.00106

RUN NO. 2267/ 0 RN/L = 5.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.27610	.03110	.00460	-.00270	-.00140	.12640	.02740
2.990	-4.000	-.23150	.03080	.00890	-.00380	-.00150	.12800	.02790
2.990	-2.000	-.15980	.03680	.01290	-.00530	-.00070	.13310	.02870
2.990	.000	-.10220	.05090	.01010	-.00300	-.00090	.13600	.02890
2.990	2.000	-.04450	.06080	.01190	-.00280	.00000	.13420	.02890
2.990	4.000	.00780	.07120	.01230	-.00280	.00000	.13420	.02920
2.990	6.000	.07320	.07860	.01280	-.00060	.00040	.13110	.02940
2.990	8.000	.16270	.07250	.01430	.00250	.00080	.12710	.02920
2.990	10.000	.26700	.05630	.01760	.00320	.00130	.12590	.02880
	GRADIENT	.03117	.00475	.00064	.00009	.00018	.00090	.00018

RUN NO. 2268/ 0 RN/L = 5.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.19950	.03040	.02050	-.01110	-.00310	.12210	.00460
4.960	-4.000	-.17430	.03310	.01750	-.00750	-.00230	.11840	.00580
4.960	-2.000	-.11960	.03740	.01400	-.00320	-.00130	.11240	.00740
4.960	.000	-.05920	.04010	.01390	-.00200	-.00060	.10840	.00790
4.960	2.000	.00840	.04130	.01880	-.00380	.00010	.10590	.00770
4.960	4.000	.06450	.03600	.01610	-.00360	-.00040	.10610	.00790
4.960	6.000	.12480	.03510	.01570	-.00200	.00010	.10710	.00780
4.960	8.000	.19180	.02910	.01640	-.00130	.00060	.10690	.00800
4.960	10.000	.26670	.01790	.01840	-.00050	.00110	.10910	.00800
	GRADIENT	.02974	.00081	-.00024	.00072	.00032	-.00183	.00034

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72109) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2036/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.13130	-.05190	-.00320	-.00010	.00130	.07860	.07410
.601	-4.000	-.11670	-.04570	-.01230	.00190	.00040	.08050	.07200
.601	-2.000	-.06860	-.03310	-.00810	.00170	.00050	.07820	.07160
.601	.000	-.02060	-.02210	-.01210	.00270	.00000	.07650	.06990
.601	2.000	.02860	-.01060	-.00790	.00170	.00000	.06960	.07130
.601	4.000	.07740	.00020	-.00880	.00310	.00030	.06740	.06930
.601	6.000	.12340	.01360	-.01050	.00450	.00020	.06240	.07010
.601	8.000	.17800	.02580	-.01020	.00520	.00020	.05660	.07070
.601	10.000	.24390	.03430	-.00780	.00670	.00110	.05150	.07030
	GRADIENT	.02358	.00579	-.00022	.00024	-.00010	-.00143	-.00041

RUN NO. 2037/ 0 RN/L = 5.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.803	-5.000	-.15910	-.05040	-.01800	.00440	.00030	.08600	.07790
.803	-4.000	-.13330	-.04110	-.01150	.00190	-.00030	.08010	.08370
.803	-2.000	-.09350	-.02340	-.01160	.00100	-.00110	.08190	.08110
.803	.000	-.03510	-.01150	-.00710	.00150	-.00060	.08190	.07780
.803	2.000	.01520	-.00450	-.00840	.00160	-.00130	.07890	.07630
.803	4.000	.06700	.00430	-.00680	.00170	-.00110	.07650	.07580
.803	6.000	.12360	.01700	-.00510	.00270	-.00070	.07230	.07630
.803	8.000	.17910	.02880	-.00460	.00400	.00000	.06720	.07650
.803	10.000	.24660	.03590	-.00370	.00610	.00070	.06130	.07670
	GRADIENT	.02518	.00601	.00103	-.00019	-.00014	-.00076	-.00061

RUN NO. 2038/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.905	-5.000	-.15400	-.04950	-.00870	.00130	.00020	.09330	.08860
.905	-4.000	-.13200	-.04070	-.01190	.00280	-.00070	.09620	.08840
.905	-2.000	-.08730	-.02040	-.00710	.00270	-.00010	.09880	.08660
.905	.000	-.03470	-.01620	-.00670	-.00010	-.00140	.09480	.08670
.905	2.000	.02740	-.01450	-.00490	.00160	-.00120	.09100	.08650
.905	4.000	.08270	-.00630	-.00510	.00250	-.00110	.08900	.08550
.905	6.000	.13700	.00460	-.00370	.00300	-.00060	.08790	.08320
.905	8.000	.19840	.01520	-.00330	.00440	-.00010	.08170	.08340
.905	10.000	.27250	.01880	-.00220	.00670	.00070	.07370	.08400
	GRADIENT	.02646	.00450	.00063	-.00001	-.00014	-.00068	-.00032

MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1) (R72109) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT.	XMRP =	.0000	
LREF = 1328.0000 IN.	YMRP =	.0000	
BREF = 1328.0000 IN.	ZMRP =	.0000	
SCALE = 100.0000 PERCNT			

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2039/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.16630	-.04350	-.01220	-.00120	-.00150	.11410	.08320
.999	-4.000	-.13790	-.03640	-.00850	-.00150	-.00110	.12040	.08240
.999	-2.000	-.08590	-.01830	-.00290	-.00040	-.00090	.12010	.08310
.999	.000	-.03130	-.00690	.00140	-.00300	-.00070	.11780	.08230
.999	2.000	.02940	-.00490	.00250	-.00280	-.00080	.11340	.08190
.999	4.000	.08820	-.00030	.00170	-.00130	-.00100	.11290	.08150
.999	6.000	.15180	.00510	.00190	.00020	-.00060	.10810	.08080
.999	8.000	.22640	.00600	.00370	.00160	.00020	.10170	.08320
.999	10.000	.30790	.00410	.00690	.00310	.00110	.09270	.08950
	GRADIENT	.02816	.00488	.00160	-.00011	.00005	-.00052	-.00016

RUN NO. 2040/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.15050	-.09210	-.01740	.00570	-.00210	.15950	.07680
1.198	-4.000	-.12050	-.07690	-.01680	.00540	-.00220	.15820	.08010
1.198	-2.000	-.07530	-.04510	-.00650	.00260	-.00090	.15620	.08290
1.198	.000	-.02750	-.01980	-.00860	.00260	-.00170	.15060	.08790
1.198	2.000	.01910	-.00170	-.00620	.00350	-.00180	.14130	.09060
1.198	4.000	.06710	.01780	-.00460	.00250	-.00160	.13940	.09160
1.198	6.000	.12270	.03430	-.00080	.00280	-.00090	.13580	.09400
1.198	8.000	.18990	.04280	.00200	.00310	-.00040	.13190	.09540
1.198	10.000	.27020	.04550	.00510	.00450	.00050	.12620	.09530
	GRADIENT	.02387	.01224	.00142	-.00032	.00004	-.00244	.00168

RUN NO. 2173/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-4.000	-.11830	-.07910	-.01090	.00830	.00180	.17550	.06860
1.460	-2.000	-.07080	-.04720	-.00450	.00460	.00070	.16970	.07230
1.460	.000	-.03680	-.04420	.00700	-.00670	-.00040	.16810	.07640
1.460	2.000	.00590	.00900	-.00050	.00190	-.00100	.16130	.07860
1.460	4.000	.05550	.02540	.00070	.00310	-.00120	.16380	.07810
1.460	6.000	.10670	.04510	.00110	.00370	-.00110	.16660	.07990
1.460	8.000	.16670	.06390	.00420	.00460	-.00030	.16690	.07880
1.460	10.000	.25450	.06930	.00710	.00560	.00050	.16190	.08050
1.460	-5.000	-.14240	-.09470	-.01020	.00770	.00360	.17830	.07030
	GRADIENT	.02121	.01326	.00136	-.00066	-.00038	-.00159	.00126

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72109) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2208/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.959	-5.000	-.19160	-.05110	.01650	-.00900	-.00120	.15210	.04500
1.959	-4.000	-.16200	-.03790	.01390	-.00840	-.00130	.15740	.04600
1.959	-2.000	-.11110	-.00890	.00830	-.00440	-.00060	.16260	.04860
1.959	.000	-.07610	.02400	.00820	-.00430	-.00090	.16450	.05180
1.959	2.000	-.03340	.04490	.00510	-.00200	-.00080	.15760	.05430
1.959	4.000	.02060	.06250	.00690	-.00280	.00000	.15950	.05510
1.959	6.000	.08170	.07870	.00740	-.00140	.00020	.15710	.05660
1.959	8.000	.16780	.08300	.01070	.00030	.00120	.15690	.05530
1.959	10.000	.27320	.07810	.01580	.00160	.00190	.15740	.05510
	GRADIENT	.02273	.01303	-.00111	.00076	.00011	.00054	.00121

RUN NO. 2270/ 0 RN/L = 5.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.25790	.02160	.01000	-.00080	-.00090	.12780	.02750
2.990	-4.000	-.21620	.02190	.00840	-.00210	-.00100	.12940	.02760
2.990	-2.000	-.15040	.02560	.00670	-.00240	-.00090	.13390	.02840
2.990	.000	-.08970	.03970	.01000	-.00340	-.00060	.13490	.02910
2.990	2.000	-.03480	.05010	.01210	-.00350	-.00010	.13410	.02910
2.990	4.000	.02060	.05900	.01150	-.00260	.00020	.13420	.02940
2.990	6.000	.09010	.06540	.01490	-.00160	.00060	.13020	.02960
2.990	8.000	.17720	.05880	.01410	.00130	.00080	.12720	.02920
2.990	10.000	.27830	.04520	.01700	.00260	.00140	.12680	.02880
	GRADIENT	.03059	.00445	.00036	-.00021	.00013	.00070	.00022

RUN NO. 2269/ 0 RN/L = 5.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.20050	.00970	.00090	-.00490	-.00070	.11110	.00910
4.960	-4.000	-.16910	.01810	.00710	-.00420	-.00040	.11100	.00810
4.960	-2.000	-.10740	.02970	.01460	-.00280	.00010	.10900	.00740
4.960	.000	-.04750	.03500	.01650	-.00200	.00030	.10670	.00770
4.960	2.000	.01020	.03440	.01280	-.00230	.00010	.10540	.00830
4.960	4.000	.06820	.03240	.01330	-.00230	.00050	.10640	.00810
4.960	6.000	.12660	.03360	.01710	-.00290	.00060	.10610	.00860
4.960	8.000	.19680	.02510	.01880	-.00190	.00090	.10640	.00830
4.960	10.000	.27120	.01440	.02040	-.00130	.00100	.10870	.00820
	GRADIENT	.02984	.00248	.00117	.00029	.00012	-.00065	-.00005

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72110) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2053/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.16900	-.03740	-.01010	.00570	-.00110	.09660	.06550
.602	-4.000	-.13860	-.02940	-.00800	.00260	-.00150	.09070	.06850
.602	-2.000	-.09620	-.01680	-.01160	.00520	-.00090	.09130	.06550
.602	.000	-.04710	-.00680	-.00850	.00350	-.00210	.08880	.06080
.602	2.000	-.00730	.00850	-.00930	.00500	-.00190	.08350	.06210
.602	4.000	.04660	.02290	-.00660	.00390	-.00150	.08030	.05990
.602	6.000	.10030	.03690	-.00150	.00350	-.00020	.07350	.06200
.602	8.000	.14970	.04700	-.00310	.00430	-.00050	.06650	.06120
.602	10.000	.21300	.05210	-.00710	.00560	-.00060	.06050	.06060
	GRADIENT	.02335	.00654	.00026	-.00003	-.00007	-.00160	-.00082

RUN NO. 2052/ 0 RN/L = 5.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.802	-5.000	-.19880	-.02890	-.01120	.00250	-.00040	.09700	.08240
.802	-4.000	-.17170	-.01760	-.00510	.00080	.00000	.09750	.08060
.802	-2.000	-.12510	-.00130	-.00460	-.00010	-.00100	.09820	.07630
.802	.000	-.07860	.01400	-.00280	.00020	-.00150	.09340	.07590
.802	2.000	-.02600	.02460	-.00130	.00080	-.00140	.08940	.07250
.802	4.000	.02890	.03350	-.00040	.00100	-.00130	.08710	.07250
.802	6.000	.08570	.04270	-.00470	.00190	-.00200	.08590	.06850
.802	8.000	.14420	.05160	-.00380	.00340	-.00140	.07960	.06600
.802	10.000	.21820	.05520	-.00600	.00440	-.00090	.06970	.06720
	GRADIENT	.02496	.00692	.00099	-.00009	-.00014	-.00124	-.00113

RUN NO. 2051/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.20280	-.02240	-.01510	.00630	.00040	.11380	.09520
.902	-4.000	-.17800	-.01170	-.01170	.00650	.00000	.11330	.09270
.902	-2.000	-.13210	.00620	-.00800	.00520	-.00060	.11270	.09000
.902	.000	-.07550	.01450	-.00880	.00410	-.00150	.10830	.08520
.902	2.000	-.01570	.01250	.00000	.00180	-.00190	.10540	.08170
.902	4.000	.04140	.02160	.00200	.00210	-.00140	.10460	.07790
.902	6.000	.10140	.03200	-.00010	.00130	-.00170	.09700	.07670
.902	8.000	.17320	.03660	-.00670	.00320	-.00180	.09040	.07630
.902	10.000	.25410	.03480	-.01150	.00610	-.00150	.08150	.07910
	GRADIENT	.02721	.00452	.00184	-.00056	-.00024	-.00115	-.00191

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01) (R72110) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2050/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.19140	-.01850	-.00910	.00720	.00140	.14470	.08470
.999	-4.000	-.17460	-.00550	-.00990	.00600	.00040	.14030	.08250
.999	-2.000	-.12160	.00620	-.00720	.00410	-.00010	.14800	.08310
.999	.000	-.07380	.02300	.00030	-.00070	-.00020	.13990	.07900
.999	2.000	-.01480	.02660	.00370	-.00210	-.00080	.13800	.07650
.999	4.000	.05250	.02250	.00400	-.00440	-.00230	.13620	.06950
.999	6.000	.11910	.02480	.00190	-.00410	-.00240	.13110	.07140
.999	8.000	.20100	.02050	-.00100	-.00080	-.00190	.11800	.07040
.999	10.000	.28740	.01630	-.00390	.00300	-.00110	.10620	.07270
	GRADIENT	.02700	.00478	.00177	-.00134	-.00034	-.00089	-.00152

RUN NO. 2049/ 0 RN/L = 6.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.18350	-.05150	-.01010	.00960	.00120	.17260	.09540
1.196	-4.000	-.16220	-.03980	-.00950	.00900	.00110	.17060	.09690
1.196	-2.000	-.11590	-.01050	-.00530	.00630	.00000	.16850	.09830
1.196	.000	-.07750	.01680	-.00340	.00420	-.00050	.16780	.09520
1.196	2.000	-.03680	.04050	-.00250	.00390	-.00120	.16020	.09360
1.196	4.000	.00680	.06620	.00040	.00230	-.00170	.15290	.09360
1.196	6.000	.06730	.07690	.00410	.00190	-.00140	.14830	.09400
1.196	8.000	.14020	.07970	.00320	.00400	-.00120	.14150	.09300
1.196	10.000	.23030	.07260	.00080	.00790	-.00090	.13230	.09390
	GRADIENT	.02100	.01318	.00116	-.00082	-.00034	-.00203	-.00036

RUN NO. 2176/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.19510	-.04480	-.00720	.00740	-.00330	.15720	.08710
1.460	-4.000	-.17810	-.03010	-.00860	.00640	-.00320	.15780	.08690
1.460	-2.000	-.14680	.00350	-.00930	.00400	-.00350	.15860	.08310
1.460	.000	-.09930	.03400	-.00690	.00790	-.00210	.16090	.07950
1.460	2.000	-.06640	.05970	-.00170	.00510	-.00180	.17460	.07440
1.460	4.000	-.02360	.08170	-.00170	.00320	-.00270	.17570	.07230
1.460	6.000	.02640	.10060	.00220	.00130	-.00280	.17650	.07240
1.460	8.000	.08760	.11320	.00460	.00370	-.00230	.16830	.07560
1.460	10.000	.19480	.10120	.00480	.00500	-.00240	.15000	.08110
	GRADIENT	.01912	.01431	.00081	-.00032	.00013	.00238	-.00170

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72110) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2205/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-5.000	-.25710	.00020	-.00180	-.00090	-.00130	.16900	.04800
1.962	-4.000	-.22690	.01290	-.00080	-.00130	-.00120	.16720	.04980
1.962	-2.000	-.17740	.04200	.00350	-.00250	-.00120	.16640	.05140
1.962	.000	-.13690	.06880	.00190	-.00230	-.00110	.16470	.05150
1.962	2.000	-.09150	.09070	.00340	-.00080	-.00050	.15800	.05370
1.962	4.000	-.04410	.11450	.00630	-.00020	.00000	.15860	.05480
1.962	6.000	.01510	.13780	.00600	.00000	.00010	.15990	.05680
1.962	8.000	.09810	.14080	.00790	.00190	.00100	.15950	.05870
1.962	10.000	.21390	.12370	.01170	.00410	.00190	.15450	.05940
	GRADIENT	.02318	.01277	.00078	.00009	.00014	-.00125	.00069

RUN NO. 2275/ 0 RN/L = 5.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.29410	.04740	.00200	-.00350	-.00150	.12710	.02720
2.990	-4.000	-.25620	.04460	.00130	-.00360	-.00220	.12970	.02730
2.990	-2.000	-.18380	.05410	.00780	-.00490	-.00110	.13700	.02770
2.990	.000	-.12720	.07280	.01120	-.00110	.00020	.13780	.02830
2.990	2.000	-.06870	.07880	.00410	.00070	.00000	.13570	.02760
2.990	4.000	-.01450	.09310	.00400	.00210	.00030	.13690	.02810
2.990	6.000	.04660	.10790	.01130	.00110	.00070	.13260	.02820
2.990	8.000	.13070	.10800	.01480	.00390	.00270	.12780	.02750
2.990	10.000	.24220	.08330	.01540	.00420	.00220	.12570	.02800
	GRADIENT	.03091	.00546	.00031	.00071	.00026	.00100	.00009

RUN NO. 2276/ 0 RN/L = 4.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.22360	.03330	-.00350	.00510	-.00150	.11060	.00650
4.960	-4.000	-.19810	.04060	.00110	.00260	-.00110	.11250	.00550
4.960	-2.000	-.14060	.05090	.01000	-.00180	-.00060	.11540	.00370
4.960	.000	-.07510	.05500	.01780	-.00450	.00010	.11590	.00310
4.960	2.000	-.00070	.05140	.02440	-.00390	.00190	.11200	.00490
4.960	4.000	.06240	.04120	.01680	-.00370	.00150	.10900	.00560
4.960	6.000	.12580	.04370	.02720	-.00490	.00180	.10980	.00390
4.960	8.000	.19140	.04090	.02590	-.00530	.00180	.10730	.00370
4.960	10.000	.25260	.03010	.01840	-.00300	.00180	.10960	.00620
	GRADIENT	.03222	.00105	.00271	-.00099	.00038	-.00018	-.00009

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72111) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2124/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.13640	-.05140	-.00910	.00300	-.00040	.09210	.06600
.598	-4.000	-.11020	-.04410	-.00700	.00110	-.00080	.09310	.06470
.598	-2.000	-.06630	-.03040	-.00800	.00170	-.00070	.09230	.06360
.598	.000	-.01680	-.01710	-.00690	.00070	-.00080	.08590	.06480
.598	2.000	.02940	-.00540	-.00780	.00280	-.00090	.08290	.06210
.598	4.000	.07320	.00630	-.01170	.00550	-.00060	.07990	.06290
.598	6.000	.12890	.01860	-.00780	.00630	-.00010	.07280	.06400
.598	8.000	.17370	.03180	-.00950	.00830	.00030	.07050	.06060
.598	10.000	.23550	.04040	-.01110	.01080	.00080	.06200	.06180
	GRADIENT	.02331	.00641	-.00025	.00028	-.00002	-.00154	-.00033

RUN NO. 2125/ 0 RN/L = 5.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.800	-5.000	-.16150	-.04290	-.00980	.00200	-.00070	.09810	.07600
.800	-4.000	-.13860	-.03310	-.00960	.00200	-.00080	.09680	.07700
.800	-2.000	-.09090	-.01570	-.00780	.00170	-.00120	.09470	.07600
.800	.000	-.04650	-.00070	-.00680	.00160	-.00120	.09020	.07390
.800	2.000	.00760	.00430	-.00720	.00210	-.00120	.08320	.07460
.800	4.000	.06650	.01200	-.00860	.00390	-.00110	.08150	.07340
.800	6.000	.11840	.02540	-.00760	.00530	-.00030	.07800	.07290
.800	8.000	.17540	.03840	-.00740	.00640	-.00030	.07240	.07270
.800	10.000	.24600	.04430	-.00540	.00770	.00040	.06570	.07210
	GRADIENT	.02502	.00611	.00021	.00016	-.00005	-.00199	-.00035

RUN NO. 2126/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.17450	-.04020	-.00890	.00350	.00000	.11120	.08610
.903	-4.000	-.14720	-.03170	-.00940	.00280	-.00060	.10920	.08670
.903	-2.000	-.09460	-.01460	-.00800	.00180	-.00060	.10700	.08550
.903	.000	-.04360	-.00560	-.00740	.00090	-.00070	.10450	.08260
.903	2.000	.01350	.00160	-.00670	.00140	-.00060	.09910	.08230
.903	4.000	.06930	.00780	-.00770	.00090	-.00030	.09420	.08130
.903	6.000	.12350	.01850	-.00620	.00290	.00000	.08970	.08100
.903	8.000	.18310	.02620	-.00830	.00610	.00060	.08330	.08010
.903	10.000	.25440	.02880	-.01040	.00960	.00110	.07070	.08210
	GRADIENT	.02697	.00530	.00023	-.00027	-.00002	-.00182	-.00063

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(01) (R72111) (22 FEB 73)

REFERENCE DATA

$REF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
$CALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2128/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.004	-5.000	-.17380	-.03430	-.00500	.00100	-.00030	.13900	.08520
1.004	-4.000	-.14820	-.02510	-.00560	.00070	-.00060	.13830	.08520
1.004	-2.000	-.09530	-.00820	-.00030	-.00180	-.00050	.13330	.08190
1.004	.000	-.04470	.00250	.00180	-.00310	-.00100	.13410	.08410
1.004	2.000	.00910	.00820	.00180	-.00340	-.00090	.12320	.08610
1.004	4.000	.06620	.01680	.00230	-.00180	-.00010	.11500	.08860
1.004	6.000	.13140	.01960	.00450	-.00030	.00050	.10530	.08350
1.004	8.000	.20790	.02020	.00440	.00100	.00100	.09550	.09050
1.004	10.000	.28890	.01810	.00570	.00300	.00190	.08360	.10300
	GRADIENT	.02652	.00556	.00093	-.00041	-.00000	-.00256	.00036

RUN NO. 2127/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.16460	-.06900	-.00940	.00320	-.00010	.16860	.08830
1.199	-4.000	-.13700	-.05710	-.00760	.00250	-.00030	.16840	.08820
1.199	-2.000	-.08930	-.03320	-.00550	.00150	-.00050	.16600	.08840
1.199	.000	-.04770	-.00560	-.00430	.00120	-.00070	.16040	.08870
1.199	2.000	-.00420	.01620	-.00040	.00000	-.00070	.15000	.08870
1.199	4.000	.04280	.03720	-.00100	.00060	-.00080	.14610	.08920
1.199	6.000	.09760	.05210	-.00130	.00170	-.00040	.14070	.08970
1.199	8.000	.16310	.06240	.00060	.00280	.00010	.13260	.09120
1.199	10.000	.24110	.06610	.00200	.00620	.00100	.12150	.09360
	GRADIENT	.02267	.01197	.00099	-.00031	-.00007	-.00271	.00010

RUN NO. 2197/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.16640	-.07010	-.00500	.00330	-.00100	.17510	.07600
1.463	-4.000	-.14140	-.05480	-.00520	.00330	-.00130	.17500	.07540
1.463	-2.000	-.09970	-.02320	-.00410	.00270	-.00140	.17360	.07660
1.463	.000	-.06160	.00440	-.00190	.00150	-.00150	.17100	.07790
1.463	2.000	-.02150	.03200	-.00200	.00220	-.00140	.16500	.07870
1.463	4.000	.02620	.05150	-.00020	.00190	-.00110	.16360	.07880
1.463	6.000	.07970	.07050	.00220	.00320	-.00040	.16300	.07960
1.463	8.000	.13940	.08850	.00300	.00540	.00000	.16160	.08230
1.463	10.000	.23800	.08540	.00290	.00570	.00020	.14870	.08790
	GRADIENT	.02091	.01374	.00056	-.00018	-.00001	-.00141	.00039

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72111) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2210/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-5.000	-.22420	-.01990	.00540	-.00410	-.00150	.16240	.04910
1.962	-4.000	-.19310	-.00710	.00490	-.00410	-.00150	.16390	.04990
1.962	-2.000	-.14460	.02080	.00530	-.00330	-.00120	.16600	.05150
1.962	.000	-.10210	.04930	.00620	-.00360	-.00130	.16240	.05360
1.962	2.000	-.05330	.06810	.00630	-.00260	-.00090	.15630	.05460
1.962	4.000	-.00560	.09010	.00630	-.00170	-.00010	.15770	.05480
1.962	6.000	.05050	.11310	.00760	-.00080	.00040	.15720	.05580
1.962	8.000	.13180	.12170	.01040	.00100	.00120	.15600	.05720
1.962	10.000	.24140	.11360	.01480	.00270	.00190	.15420	.05810
	GRADIENT	.02386	.01234	.00015	.00025	.00014	-.00080	.00068

RUN NO. 2266/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.26480	.03050	.00750	-.00230	-.00110	.12710	.02820
2.990	-4.000	-.22250	.02900	.00870	-.00250	-.00080	.12960	.02840
2.990	-2.000	-.15100	.03400	.01000	-.00280	-.00080	.13550	.02880
2.990	.000	-.09070	.04470	.00720	-.00130	-.00080	.13520	.02900
2.990	2.000	-.03050	.05280	.01170	-.00110	.00010	.13280	.02930
2.990	4.000	.02500	.06410	.01190	.00080	.00080	.13380	.02960
2.990	6.000	.08860	.07330	.01260	.00080	.00030	.12900	.02930
2.990	8.000	.16860	.07510	.01150	.00550	.00180	.12450	.02890
2.990	10.000	.27100	.06050	.01470	.00630	.00240	.12260	.02910
	GRADIENT	.03194	.00391	.00043	.00034	.00019	.00062	.00015

RUN NO. 2265/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.18850	.02700	.02600	-.00520	.00140	.12030	.00600
4.960	-4.000	-.16240	.02970	.02130	-.00280	.00100	.11750	.00620
4.960	-2.000	-.10770	.03330	.01390	.00030	.00020	.11340	.00640
4.960	.000	-.04970	.03480	.00980	.00140	.00000	.11110	.00670
4.960	2.000	.01110	.03450	.00950	.00060	.00030	.11060	.00730
4.960	4.000	.07910	.03120	.01800	-.00100	.00070	.10770	.00800
4.960	6.000	.14020	.02590	.01180	.00050	.00050	.10670	.00830
4.960	8.000	.19830	.02370	.01080	.00300	.00070	.10900	.00810
4.960	10.000	.26880	.01490	.01340	.00340	.00130	.11120	.00760
	GRADIENT	.02955	.00053	-.00115	.00046	-.00008	-.00130	.00021

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72112) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2097/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.599	-5.000	-.14570	-.04780	-.01370	.00320	-.00040	.09010	.07020
.599	-4.000	-.12490	-.03830	-.00990	.00260	.00070	.09270	.06940
.599	-2.000	-.07710	-.02420	-.01030	.00380	.00040	.09100	.06690
.599	.000	-.02590	-.01210	-.01040	.00320	.00060	.08560	.06740
.599	2.000	.02060	-.00120	-.01460	.00560	.00060	.08260	.06550
.599	4.000	.07080	.01000	-.00700	.00510	.00120	.07690	.06660
.599	6.000	.12030	.02190	-.00460	.00560	.00160	.06810	.07020
.599	8.000	.17830	.03540	-.00680	.00970	.00230	.06490	.06700
.599	10.000	.24060	.04360	-.01240	.01340	.00260	.05720	.06730
	GRADIENT	.02419	.00630	.00027	.00028	.00011	-.00161	-.00044

RUN NO. 2096/ 0 RN/L = 5.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.803	-5.000	-.16650	-.04410	-.01010	.00210	.00030	.09720	.07900
.803	-4.000	-.14060	-.03450	-.00870	.00270	.00080	.09980	.07690
.803	-2.000	-.09300	-.01610	-.00860	.00230	.00020	.09690	.07550
.803	.000	-.04080	-.00270	-.00530	.00220	.00030	.08990	.07470
.803	2.000	.01270	.00170	-.00330	.00230	.00090	.08680	.07330
.803	4.000	.06810	.00900	-.00510	.00300	.00090	.08070	.07720
.803	6.000	.12160	.02190	-.00390	.00450	.00150	.07730	.07630
.803	8.000	.18010	.03480	-.00510	.00730	.00200	.07340	.07420
.803	10.000	.24920	.04140	-.00460	.01020	.00260	.06520	.07390
	GRADIENT	.02595	.00588	.00068	.00005	.00005	-.00202	-.00029

RUN NO. 2094/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.993	-5.000	-.16600	-.03690	-.00740	.00180	-.00020	.13480	.08190
.993	-4.000	-.13960	-.02780	-.00420	.00180	.00020	.13650	.08300
.993	-2.000	-.08790	-.01230	-.00570	.00150	-.00020	.13480	.08170
.993	.000	-.03140	-.00440	-.00300	.00070	.00000	.12930	.08050
.993	2.000	.02160	.00370	.00090	.00030	.00050	.12270	.08180
.993	4.000	.07750	.01080	.00050	.00120	.00090	.12020	.07950
.993	6.000	.14180	.01720	.00420	.00220	.00180	.11170	.08500
.993	8.000	.21740	.01580	.00660	.00380	.00220	.09780	.08910
.993	10.000	.29890	.01010	.00810	.00600	.00290	.08310	.09870
	GRADIENT	.02706	.00518	.00088	-.00013	.00010	-.00189	-.00027

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72112) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2095/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.897	-5.000	-.16740	-.04320	-.00940	.00130	.00040	.10780	.08610
.897	-4.000	-.14300	-.03380	-.00950	.00200	.00030	.10940	.08640
.897	-2.000	-.09230	-.01670	-.00610	.00160	.00000	.10680	.08700
.897	.000	-.04340	-.00840	-.00500	.00200	.00020	.10270	.08650
.897	2.000	.01420	-.00390	-.00650	.00160	.00020	.09920	.08410
.897	4.000	.07130	.00500	-.00540	.00240	.00060	.09400	.08450
.897	6.000	.12600	.01310	-.00600	.00480	.00110	.09060	.08360
.897	8.000	.18490	.02450	-.00370	.00740	.00200	.08260	.08290
.897	10.000	.25970	.02610	-.00430	.01100	.00290	.07080	.08380
	GRADIENT	.02641	.00514	.00046	.00007	.00002	-.00163	-.00038

RUN NO. 2093/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.15420	-.07610	-.00970	.00370	-.00020	.16310	.09130
1.198	-4.000	-.12680	-.06330	-.00960	.00350	-.00020	.16180	.09310
1.198	-2.000	-.07720	-.03960	-.00680	.00230	.00000	.15900	.09550
1.198	.000	-.03640	-.01360	-.00400	.00240	.00000	.15690	.09390
1.198	2.000	.00940	.00620	-.00250	.00070	.00010	.14810	.09210
1.198	4.000	.05810	.02520	-.00240	.00150	.00010	.14320	.09350
1.198	6.000	.11370	.04080	.00010	.00280	.00040	.13960	.09420
1.198	8.000	.17610	.05280	.00300	.00300	.00110	.13430	.09290
1.198	10.000	.25330	.05570	.00430	.00620	.00220	.12460	.09210
	GRADIENT	.02320	.01137	.00093	-.00030	.00004	-.00222	.00007

RUN NO. 2188/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.465	-5.000	-.14900	-.08910	-.00950	.00550	.00140	.18850	.06990
1.465	-4.000	-.12120	-.07330	-.00620	.00410	.00070	.18650	.06960
1.465	-2.000	-.07190	-.04090	-.00070	.00220	.00020	.18060	.07030
1.465	.000	-.03350	-.01220	-.00050	.00230	-.00040	.17740	.07520
1.465	2.000	.00970	.00830	.00060	.00290	-.00110	.16570	.07840
1.465	4.000	.06120	.02570	.00060	.00240	-.00050	.16340	.08110
1.465	6.000	.10940	.04840	.00110	.00310	.00000	.16190	.08270
1.465	8.000	.16820	.06920	.00400	.00450	.00080	.15890	.08430
1.465	10.000	.27370	.06180	.00300	.00460	.00070	.14270	.09080
	GRADIENT	.02275	.01296	.00106	-.00028	-.00023	-.00295	.00137

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72112) (22 FEB 73

REFERENCE DATA

$REF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
$CALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2207/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.961	-5.000	-.20100	-.03650	.01130	-.00670	-.00140	.15490	.04870
1.961	-4.000	-.17150	-.02330	.00880	-.00580	-.00140	.15880	.04950
1.961	-2.000	-.12060	.00320	.00500	-.00350	-.00110	.16370	.05110
1.961	.000	-.08020	.03180	.00490	-.00330	-.00100	.16290	.05290
1.961	2.000	-.03240	.05130	.00470	-.00260	-.00090	.15570	.05480
1.961	4.000	.01380	.07430	.00590	-.00250	-.00020	.15850	.05460
1.961	6.000	.06950	.09750	.00660	-.00090	.00040	.15770	.05590
1.961	8.000	.14860	.10770	.00980	.00110	.00130	.15490	.05830
1.961	10.000	.25590	.10300	.01440	.00290	.00190	.15510	.06020
	GRADIENT	.02350	.01238	-.00057	.00046	.00012	.00006	.00072

RUN NO. 2271/ 0 RN/L = 5.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.25210	.02150	.00880	-.00250	-.00100	.12750	.02820
2.990	-4.000	-.21180	.02030	.00590	-.00290	-.00110	.12960	.02830
2.990	-2.000	-.14130	.02530	.01010	-.00450	-.00080	.13460	.02880
2.990	.000	-.08090	.03650	.00880	-.00340	-.00020	.13400	.02910
2.990	2.000	-.02040	.04480	.01200	-.00260	.00030	.13200	.02920
2.990	4.000	.03560	.05610	.01280	-.00110	.00050	.13310	.02960
2.990	6.000	.09830	.06580	.01340	-.00050	.00060	.12900	.02950
2.990	8.000	.17540	.06770	.01120	.00360	.00150	.12510	.02930
2.990	10.000	.27610	.05610	.01440	.00610	.00250	.12390	.02950
	GRADIENT	.03177	.00403	.00059	.00015	.00019	.00050	.00015

RUN NO. 2272/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.22140	.00520	-.01440	-.00090	-.00110	.12100	.00670
4.960	-4.000	-.18260	.01500	-.00280	-.00160	-.00070	.11770	.00670
4.960	-2.000	-.11040	.02790	.01170	-.00230	-.00010	.11180	.00710
4.960	.000	-.04440	.03320	.01700	-.00250	.00000	.10830	.00760
4.960	2.000	.01500	.03150	.01410	-.00240	-.00010	.10860	.00790
4.960	4.000	.08520	.02870	.02170	-.00350	.00100	.10530	.00830
4.960	6.000	.14740	.02510	.02040	-.00320	.00160	.10530	.00870
4.960	8.000	.20470	.02210	.01930	-.00070	.00170	.10740	.00850
4.960	10.000	.27250	.01470	.01910	.00070	.00140	.10900	.00820
	GRADIENT	.03365	.00253	.00352	-.00024	.00019	-.00165	.00019

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72113) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2080/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.16310	-.03370	-.00800	.00300	-.00020	.09320	.06470
.602	-4.000	-.13640	-.02710	-.00740	.00150	-.00060	.09030	.06560
.602	-2.000	-.09150	-.01320	-.00890	.00260	-.00050	.08890	.06430
.602	.000	-.04350	-.00160	-.00610	.00190	-.00090	.08540	.06200
.602	2.000	.00240	.01110	-.00550	.00250	-.00060	.07990	.06260
.602	4.000	.05240	.02410	-.00430	.00240	-.00040	.07650	.06150
.602	6.000	.10160	.03700	-.00540	.00340	.00000	.07090	.06240
.602	8.000	.15280	.04940	-.00530	.00410	.00020	.06340	.06300
.602	10.000	.21360	.05800	-.00640	.00540	.00070	.05590	.06330
	GRADIENT	.02371	.00638	.00042	-.00000	-.00002	-.00182	-.00043

RUN NO. 2081/ 0 RN/L = 5.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.800	-5.000	-.19000	-.02650	-.01040	.00240	-.00020	.09600	.07830
.800	-4.000	-.16590	-.01680	-.00730	.00140	-.00020	.09650	.07700
.800	-2.000	-.11810	.00050	-.00530	.00040	-.00080	.09530	.07500
.800	.000	-.07050	.01500	-.00440	.00120	-.00090	.08980	.07410
.800	2.000	-.01790	.02340	-.00340	.00140	-.00080	.08560	.07200
.800	4.000	.03490	.03180	-.00410	.00200	-.00090	.08310	.07130
.800	6.000	.09140	.04340	-.00530	.00290	-.00080	.07860	.07060
.800	8.000	.14790	.05470	-.00520	.00440	.00000	.07150	.07040
.800	10.000	.21490	.06190	-.00480	.00570	.00080	.06180	.07260
	GRADIENT	.02489	.00650	.00065	-.00000	-.00008	-.00161	-.00078

RUN NO. 2082/ 0 RN/L = 6.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.19930	-.02230	-.01250	.00500	.00030	.11300	.08910
.900	-4.000	-.17360	-.01200	-.01070	.00500	.00000	.11220	.08780
.900	-2.000	-.12580	.00510	-.00760	.00340	-.00050	.11050	.08590
.900	.000	-.07110	.01370	-.00630	.00220	-.00090	.10650	.08260
.900	2.000	-.01070	.01640	-.00110	.00100	-.00100	.10260	.08070
.900	4.000	.04460	.02450	-.00030	.00130	-.00080	.09970	.07880
.900	6.000	.10080	.03510	.00000	.00130	-.00050	.09370	.07840
.900	8.000	.16210	.04370	-.00270	.00280	-.00030	.08710	.07880
.900	10.000	.23440	.04770	-.00290	.00500	.00030	.07790	.08160
	GRADIENT	.02717	.00495	.00140	-.00049	-.00013	-.00154	-.00117

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72113) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2083/ 0 RN/L = 6.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.19290	-.01700	-.00790	.00490	.00070	.13970	.08410
.996	-4.000	-.17100	-.00630	-.00830	.00400	.00000	.13750	.08250
.996	-2.000	-.11710	.00740	-.00430	.00220	-.00020	.13950	.08330
.996	.000	-.06960	.02190	.00080	-.00090	-.00030	.13420	.08140
.996	2.000	-.01410	.02750	.00220	-.00150	-.00060	.12870	.08020
.996	4.000	.04820	.02910	.00300	-.00230	-.00110	.12240	.07800
.996	6.000	.11450	.03310	.00180	-.00130	-.00100	.11730	.07840
.996	8.000	.18920	.03330	.00180	.00090	-.00040	.10740	.07940
.996	10.000	.26740	.03260	.00430	.00370	.00040	.09640	.08020
	GRADIENT	.02658	.00524	.00141	-.00085	-.00016	-.00184	-.00060

RUN NO. 2084/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.18450	-.05060	-.00900	.00620	.00070	.17050	.09300
1.196	-4.000	-.15980	-.03960	-.00820	.00560	.00050	.16950	.09320
1.196	-2.000	-.11230	-.01340	-.00470	.00380	-.00010	.16710	.09360
1.196	.000	-.07150	.01400	-.00340	.00250	-.00050	.16240	.09300
1.196	2.000	-.02940	.03780	-.00110	.00190	-.00080	.15340	.09230
1.196	4.000	.01430	.06200	.00000	.00150	-.00100	.14710	.09310
1.196	6.000	.07040	.07590	.00160	.00200	-.00070	.14140	.09490
1.196	8.000	.13730	.08430	.00160	.00390	-.00050	.13360	.09710
1.196	10.000	.21460	.09010	.00320	.00630	.00020	.12390	.10240
	GRADIENT	.02190	.01266	.00104	-.00055	-.00020	-.00265	-.00005

RUN NO. 2185/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.19520	-.04410	-.00640	.00560	-.00240	.16530	.08290
1.463	-4.000	-.17460	-.02890	-.00720	.00500	-.00240	.16550	.08270
1.463	-2.000	-.13780	.00290	-.00800	.00380	-.00250	.16550	.08120
1.463	.000	-.09420	.03240	-.00600	.00550	-.00180	.16850	.07960
1.463	2.000	-.05610	.05750	-.00240	.00420	-.00150	.16860	.07700
1.463	4.000	-.01210	.07920	-.00210	.00340	-.00190	.16880	.07610
1.463	6.000	.03960	.09890	.00070	.00300	-.00170	.17040	.07600
1.463	8.000	.09990	.11560	.00270	.00490	-.00110	.16620	.07760
1.463	10.000	.19550	.11630	.00480	.00610	-.00050	.15660	.07900
	GRADIENT	.02024	.01388	.00061	-.00018	.00009	.00046	-.00082

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72113) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2206/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.958	-5.000	-.25310	.00340	.00020	-.00160	-.00140	.16710	.04950
1.958	-4.000	-.22210	.01600	.00110	-.00200	-.00140	.16590	.05080
1.958	-2.000	-.17270	.04420	.00360	-.00220	-.00130	.16530	.05210
1.958	.000	-.13010	.07070	.00320	-.00220	-.00130	.16140	.05300
1.958	2.000	-.08180	.09030	.00420	-.00100	-.00070	.15500	.05430
1.958	4.000	-.03670	.11550	.00590	-.00050	.00000	.15570	.05490
1.958	6.000	.02070	.13920	.00600	.00020	.00030	.15650	.05590
1.958	8.000	.10360	.14440	.00790	.00230	.00120	.15420	.05700
1.958	10.000	.22000	.12870	.01320	.00320	.00210	.14610	.05650
	GRADIENT	.02370	.01244	.00057	.00014	.00014	-.00145	.00058

RUN NO. 2274/ 0 RN/L = 5.52 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.28370	.04350	.00390	-.00330	-.00130	.12740	.02760
2.990	-4.000	-.24250	.04130	.00510	-.00360	-.00160	.12970	.02780
2.990	-2.000	-.16990	.04790	.00880	-.00460	-.00100	.13560	.02820
2.990	.000	-.11000	.06210	.01010	-.00250	-.00020	.13530	.02850
2.990	2.000	-.05230	.06830	.00650	-.00070	.00000	.13310	.02830
2.990	4.000	.00630	.08020	.00800	.00030	.00040	.13270	.02870
2.990	6.000	.07120	.09160	.01280	-.00010	.00070	.12860	.02840
2.990	8.000	.15720	.08800	.01450	.00130	.00160	.12360	.02810
2.990	10.000	.26110	.06790	.01640	-.00010	.00090	.12060	.02840
	GRADIENT	.03187	.00436	.00038	.00046	.00022	.00052	.00011

RUN NO. 2273/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.22200	.02930	.00050	-.00070	-.00110	.11650	.00640
4.960	-4.000	-.19250	.03570	.00360	-.00070	-.00080	.11580	.00620
4.960	-2.000	-.13050	.04520	.01000	-.00140	-.00030	.11440	.00560
4.960	.000	-.06590	.04950	.01540	-.00240	.00020	.11250	.00560
4.960	2.000	-.00100	.04730	.01800	-.00340	.00100	.10950	.00660
4.960	4.000	.06370	.03880	.01470	-.00280	.00100	.10750	.00710
4.960	6.000	.12630	.04010	.02140	-.00370	.00140	.10850	.00640
4.960	8.000	.19060	.03720	.02210	-.00380	.00200	.10630	.00730
4.960	10.000	.26290	.02620	.02150	-.00340	.00200	.10690	.00780
	GRADIENT	.03184	.00123	.00180	-.00030	.00025	-.00102	.00008

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72114) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1312/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.620	-.02500	-.02220	.07880	-.01340	-.00280	.08610	.07660
.598	-3.620	-.02620	-.02090	.05240	-.01110	-.00200	.09050	.07320
.598	-1.540	-.02720	-.01900	.02270	-.00660	.00000	.09300	.07120
.598	.490	-.01920	-.01700	-.00440	-.00240	.00140	.08830	.07520
.598	2.550	-.01570	-.01610	-.03380	.00300	.00250	.08750	.07650
.598	4.560	-.01920	-.01700	-.06390	.00860	.00270	.08160	.08220
.598	6.610	-.00440	-.02150	-.10130	.01640	.00380	.08080	.08180
.598	.490	-.01920	-.01700	-.00560	-.00170	.00080	.08870	.07460
	GRADIENT	.00125	.00052	-.01414	.00240	.00058	-.00114	.00114

RUN NO. 1313/ 0 RN/L = 5.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.802	-5.690	-.04310	-.00080	.09880	-.02420	-.00420	.09200	.08820
.802	-3.660	-.05190	.00360	.06040	-.01670	-.00360	.09160	.08730
.802	-1.560	-.04790	.00590	.03000	-.00980	-.00200	.09200	.08530
.802	.490	-.04260	.00700	-.00300	-.00090	-.00060	.09270	.08350
.802	2.570	-.04390	.00760	-.04020	.00850	.00050	.09120	.08580
.802	4.610	-.04210	.00830	-.07270	.01640	.00150	.08590	.09060
.802	6.670	-.03530	.00290	-.11100	.02750	.00270	.08580	.09360
.802	.490	-.04730	.00660	-.00460	-.00090	-.00080	.09420	.08370
	GRADIENT	.00114	.00054	-.01627	.00409	.00061	-.00059	.00034

RUN NO. 1314/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.720	-.04800	-.00090	.10410	-.02650	-.00480	.11120	.09330
.900	-3.690	-.04930	.00120	.06840	-.01890	-.00380	.11140	.08900
.900	-1.580	-.05150	.00530	.03440	-.01120	-.00260	.11090	.09010
.900	.490	-.05380	.00630	-.00410	-.00110	-.00110	.11330	.08760
.900	2.560	-.05450	.00840	-.03910	.00880	.00060	.11220	.08600
.900	4.620	-.04610	.00740	-.07510	.01940	.00190	.11130	.08670
.900	6.700	-.04230	.00430	-.11590	.02940	.00310	.10980	.08980
.900	.490	-.04870	.00740	-.00270	-.00100	-.00110	.11130	.08710
	GRADIENT	.00016	.00075	-.01736	.00465	.00070	.00005	-.00042

MSFC 545 (IA1) MOD ATP LV₈(T3)(S1)/(O1) (R72114) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1316/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.992	-5.750	-.05470	.00380	.11380	-.03300	-.00610	.13860	.09200
.992	-3.700	-.05580	.00750	.07420	-.02380	-.00480	.14080	.09190
.992	-1.580	-.05420	.01160	.03560	-.01270	-.00260	.14150	.09000
.992	.500	-.05260	.01250	-.00970	.00230	-.00160	.14470	.08680
.992	2.600	-.05130	.01380	-.05120	.01590	.00000	.14080	.08240
.992	4.690	-.04920	.01420	-.09510	.02880	.00150	.14780	.08730
.992	6.730	-.04840	.01580	-.13160	.03620	.00250	.14130	.08190
.992	.500	-.05430	.01300	-.00860	.00160	-.00150	.14050	.08450
	GRADIENT	.00077	.00075	-.02029	.00638	.00073	.00063	-.00080

RUN NO. 1315/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.800	-.06170	-.00160	.11420	-.02830	-.00690	.16460	.09730
1.197	-3.730	-.06100	.00060	.07490	-.02180	-.00530	.16320	.09580
1.197	-1.590	-.06430	.00620	.03410	-.01200	-.00320	.16290	.09470
1.197	.510	-.06730	.01050	-.00970	.00090	-.00140	.16640	.09290
1.197	2.600	-.06620	.01140	-.04890	.01210	.00040	.16490	.09380
1.197	4.690	-.06640	.01230	-.08680	.02070	.00240	.16470	.09390
1.197	6.810	-.06440	.01220	-.13190	.03070	.00350	.16660	.09490
1.197	.500	-.06760	.01080	-.00650	-.00030	-.00160	.16690	.09350
	GRADIENT	-.00061	.00136	-.01933	.00519	.00090	.00024	-.00022

RUN NO. 1310/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.465	-5.840	-.07100	.00720	.11020	-.01870	-.00690	.17670	.07920
1.465	-3.750	-.07050	.01350	.07160	-.01490	-.00490	.17500	.07520
1.465	-1.590	-.07400	.01840	.03200	-.00860	-.00320	.17430	.07440
1.465	.500	-.07130	.02080	-.00530	-.00200	-.00140	.17470	.07430
1.465	2.640	-.06860	.01860	-.04540	.00530	.00020	.17690	.07430
1.465	4.740	-.06800	.01790	-.08750	.01240	.00190	.18000	.07720
1.465	6.870	-.06780	.01690	-.13130	.01880	.00300	.18060	.07610
1.465	.510	-.07240	.02010	-.00640	-.00170	-.00150	.17750	.07310
	GRADIENT	.00049	.00043	-.01865	.00323	.00080	.00059	.00018

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72114) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT.	XMRP =	.0000	
LREF = 1320.0000 IN.	YMRP =	.0000	
BREF = 1320.0000 IN.	ZMRP =	.0000	
SCALE = 100.0000 PERCNT			

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1300/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.961	-5.890	-.10140	.04090	.11270	-.01190	-.00540	.16900	.05510
1.961	-3.770	-.09920	.04420	.07020	-.00660	-.00330	.16420	.05430
1.961	-1.590	-.10170	.04810	.03020	-.00340	-.00190	.16490	.05350
1.961	.520	-.10140	.04930	-.00710	-.00060	-.00030	.16360	.05350
1.961	2.660	-.10440	.04900	-.04750	.00290	.00140	.16880	.05280
1.961	4.800	-.09950	.04830	-.08830	.00680	.00250	.17010	.05230
1.961	6.930	-.09580	.04760	-.13310	.01100	.00340	.17260	.05140
1.961	.480	-.10110	.04880	-.00760	-.00020	-.00010	.16380	.05240
	GRADIENT	-.00016	.00043	-.01845	.00155	.00070	.00073	-.00022

RUN NO. 1295/ 0 RN/L = 5.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.800	-.08290	.04860	.11480	-.00460	-.00260	.14100	.02710
2.990	-3.720	-.08200	.05200	.07330	-.00130	-.00130	.14150	.02600
2.990	-1.580	-.08140	.05440	.03380	-.00070	.00000	.14070	.02630
2.990	.490	-.08500	.05640	-.00780	.00100	-.00020	.13970	.02700
2.990	2.640	-.08440	.05470	-.05090	.00310	.00000	.14080	.02630
2.990	4.720	-.07660	.05120	-.08960	.00460	.00070	.14090	.02630
2.990	6.800	-.07310	.04780	-.13320	.00740	.00200	.14120	.02660
2.990	.500	-.08650	.05550	-.01000	.00120	-.00020	.13990	.02730
	GRADIENT	.00037	-.00006	-.01945	.00074	.00019	-.00005	.00003

RUN NO. 1294/ 0 RN/L = 4.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.610	-.05220	.03870	.10670	-.00940	-.00110	.11900	.00790
4.960	-3.610	-.05670	.04150	.06970	-.00250	-.00080	.11530	.00810
4.960	-1.540	-.04870	.04230	.03740	-.00130	.00010	.11210	.00810
4.960	.480	-.04780	.04220	.00160	-.00240	.00040	.11150	.00790
4.960	2.550	-.04720	.04210	-.04390	-.00220	-.00130	.11270	.00810
4.960	4.580	-.04860	.04310	-.07770	.00240	.00000	.11440	.00810
4.960	6.600	-.05650	.04150	-.12280	.01240	-.00020	.11930	.00810
4.960	.480	-.04820	.04140	-.00500	-.00290	-.00140	.11090	.00820
	GRADIENT	.00087	.00015	-.01837	.00043	.00001	-.00006	.00000

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72115) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2018/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.07110	-.04750	.00100	-.00190	.00010	.01310	.03630
.602	-4.000	-.05900	-.04030	-.00010	-.00100	-.00010	.01320	.03670
.602	-2.000	-.03670	-.02470	.00010	-.00250	-.00010	.01200	.03720
.602	.000	-.01800	-.00970	-.00400	-.00010	.00020	.01190	.03630
.602	2.000	-.00200	.00800	-.00200	-.00060	.00010	.00990	.03690
.602	4.000	.01890	.02190	-.00440	.00060	-.00060	.01160	.03360
.602	6.000	.04590	.03720	.00140	.00100	.00000	.01190	.02950
.602	8.000	.06560	.05060	.00110	.00410	-.00020	.00900	.02950
.602	10.000	.09370	.06400	.00380	.00550	-.00010	.00580	.02940
	GRADIENT	.00981	.00780	-.00056	.00025	-.00004	-.00027	-.00022

RUN NO. 2019/ 0 RN/L = 5.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.802	-5.000	-.08180	-.04750	-.00570	.00070	-.00020	.01160	.04530
.802	-4.000	-.06810	-.03870	-.00550	.00160	-.00010	.01230	.04550
.802	-2.000	-.04720	-.02150	-.00720	.00060	.00000	.01170	.04520
.802	.000	-.02470	-.00640	-.00580	.00070	-.00010	.01650	.04180
.802	2.000	.00260	.00650	-.00360	.00050	.00000	.01570	.04050
.802	4.000	.02640	.01820	-.00430	.00190	-.00020	.01610	.03820
.802	6.000	.05120	.03150	-.00370	.00370	-.00030	.01490	.03650
.802	8.000	.07740	.04520	-.00280	.00500	-.00040	.01530	.03300
.802	10.000	.10550	.05770	.00200	.00540	-.00030	.01510	.03080
	GRADIENT	.01193	.00734	.00023	.00004	.00000	.00058	-.00084

RUN NO. 2020/ 0 RN/L = 6.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.09490	-.04630	-.00940	.00380	.00000	.02010	.05250
.901	-4.000	-.07870	-.03920	-.00590	.00250	-.00010	.01980	.05180
.901	-2.000	-.05470	-.02150	-.00710	.00130	-.00010	.02020	.05130
.901	.000	-.02580	-.00620	-.00580	.00090	-.00010	.02270	.04870
.901	2.000	.00270	.00280	-.00360	.00240	.00000	.02420	.04660
.901	4.000	.02990	.01430	-.00730	.00360	-.00010	.02510	.04480
.901	6.000	.06040	.02600	-.00630	.00410	-.00040	.02670	.04110
.901	8.000	.08960	.03650	-.00320	.00620	-.00020	.02680	.03960
.901	10.000	.12230	.04730	.00130	.00750	-.00010	.02600	.03790
	GRADIENT	.01379	.00681	.00026	-.00001	-.00000	.00064	-.00088

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72115) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDDLR =	10.000
ELEVTR =	.000		

RUN NO. 2021/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.08960	-.04190	-.00450	.00120	-.00020	.03940	.04770
.997	-4.000	-.07570	-.03620	-.00560	.00150	.00000	.04120	.04700
.997	-2.000	-.05100	-.02200	-.00760	.00090	-.00040	.04220	.04320
.997	.000	-.02300	-.00380	.00130	.00070	-.00030	.04370	.04200
.997	2.000	.00420	.00970	-.00300	.00230	-.00030	.04360	.04150
.997	4.000	.03300	.01790	-.00320	.00300	-.00050	.04720	.03660
.997	6.000	.07010	.02790	.00140	.00230	.00000	.04770	.03140
.997	8.000	.09910	.04070	.00280	.00460	-.00030	.04930	.03230
.997	10.000	.13340	.05070	.00530	.00530	-.00040	.04980	.02980
	GRADIENT	.01356	.00700	.00037	.00018	-.00004	.00073	-.00113

RUN NO. 2022/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.10080	-.04480	-.00370	.00120	.00000	.03990	.06290
1.198	-4.000	-.08480	-.03840	-.00450	.00030	-.00010	.03880	.06300
1.198	-2.000	-.05910	-.02200	-.00520	.00000	-.00070	.03880	.06270
1.198	.000	-.02910	-.00390	.00160	-.00180	-.00010	.04160	.06020
1.198	2.000	-.00100	.00900	-.00190	.00000	-.00050	.04120	.05980
1.198	4.000	.02460	.02600	.00040	.00110	-.00040	.04000	.06050
1.198	6.000	.05180	.04220	.00100	.00270	-.00050	.04010	.05990
1.198	8.000	.08780	.05600	.00410	.00400	-.00010	.03880	.05880
1.198	10.000	.12780	.06700	.00810	.00470	.00000	.03620	.05800
	GRADIENT	.01396	.00792	.00055	-.00004	-.00004	.00017	-.00037

RUN NO. 2167/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.10870	-.04310	-.00060	.00100	-.00060	.05080	.05200
1.461	-4.000	-.09030	-.03360	.00230	.00110	.00000	.04850	.05280
1.461	-2.000	-.06320	-.01750	.00070	.00060	-.00010	.04530	.05320
1.461	.000	-.03580	-.00070	-.00290	.00170	-.00040	.04740	.05230
1.461	2.000	-.01110	.01530	-.00290	.00220	-.00030	.04670	.05120
1.461	4.000	.01270	.03350	.00130	.00270	-.00040	.04770	.05220
1.461	6.000	.04220	.04870	.00240	.00350	-.00030	.05090	.05140
1.461	8.000	.07920	.06180	.00720	.00480	-.00030	.05330	.04670
1.461	10.000	.11540	.07460	.00960	.00610	-.00020	.05250	.04430
	GRADIENT	.01336	.00840	-.00016	.00020	-.00001	-.00026	-.00008

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72115) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2224/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.958	-5.000	-.13020	-.02030	.00580	-.00090	.00000	.05750	.03260
1.958	-4.000	-.11190	-.01490	.00500	-.00110	.00000	.05700	.03260
1.958	-2.000	-.07930	-.00240	.00540	-.00170	.00000	.05630	.03400
1.958	.000	-.05140	.01110	.00310	-.00100	.00000	.05440	.03480
1.958	2.000	-.02490	.02490	.00450	-.00020	.00000	.05100	.03610
1.958	4.000	.00250	.04230	.00360	.00140	.00000	.05130	.03600
1.958	6.000	.03290	.05700	.00690	.00060	-.00010	.04840	.03650
1.958	8.000	.06780	.07080	.01040	.00070	.00000	.04720	.03610
1.958	10.000	.11410	.07570	.00730	.00460	.00000	.04860	.03480
	GRADIENT	.01460	.00688	-.00022	.00024	.00000	-.00079	.00044

RUN NO. 2247/ 0 RN/L = 5.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.15050	-.00080	.00530	-.00010	.00000	.05100	.01610
2.990	-4.000	-.12790	.00020	.00350	.00040	-.00010	.04990	.01650
2.990	-2.000	-.08790	.00800	.00500	.00080	.00000	.04930	.01700
2.990	.000	-.05030	.01570	.00720	.00070	.00000	.04800	.01730
2.990	2.000	-.01750	.02630	.00730	.00140	.00000	.04770	.01780
2.990	4.000	.01290	.03640	.00920	.00120	.00000	.04580	.01830
2.990	6.000	.04720	.04650	.01020	.00210	.00000	.04340	.01860
2.990	8.000	.08840	.05010	.01080	.00210	-.00010	.04330	.01860
2.990	10.000	.13810	.04910	.01140	.00350	.00000	.04490	.01870
	GRADIENT	.01817	.00422	.00053	.00014	.00001	-.00052	.00023

RUN NO. 2248/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.10710	-.01870	-.00870	.00380	-.00060	.04080	.00130
4.960	-4.000	-.09110	-.01140	-.00050	.00190	-.00060	.04060	.00160
4.960	-2.000	-.05870	-.00010	.00800	.00000	-.00070	.03990	.00210
4.960	.000	-.02330	.00710	.01030	.00000	-.00060	.03900	.00240
4.960	2.000	.01840	.01010	.00960	.00120	.00000	.03810	.00270
4.960	4.000	.04690	.01940	.01050	.00140	.00010	.03930	.00290
4.960	6.000	.07840	.02480	.01270	.00120	.00010	.04090	.00320
4.960	8.000	.10980	.02760	.01400	.00150	.00030	.04180	.00310
4.960	10.000	.14600	.02520	.01060	.00250	.00000	.04400	.00330
	GRADIENT	.01747	.00399	.00189	-.00019	.00009	-.00024	.00018

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72116) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1320.0000 IN.	YMRP =	.0000		
BREF =	1320.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2027/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.05120	-.05760	.00120	.00000	.00060	.02450	.03210
.600	-4.000	-.03840	-.05050	.00050	-.00130	-.00010	.02190	.03320
.600	-2.000	-.02040	-.03580	-.00330	-.00260	-.00020	.02000	.03300
.600	.000	.00340	-.02180	-.00680	.00010	-.00010	.01930	.03340
.600	2.000	.01580	-.00170	-.00450	.00110	.00000	.01880	.03400
.600	4.000	.03660	.01380	.00230	-.00030	.00000	.01630	.03340
.600	6.000	.05870	.02860	.00230	.00190	.00000	.01460	.03140
.600	8.000	.08520	.04150	.00300	.00380	.00010	.01510	.02810
.600	10.000	.11610	.05460	.00500	.00520	.00020	.01300	.02680
	GRADIENT	.00959	.00798	-.00016	.00015	-.00003	-.00077	.00014

RUN NO. 2026/ 0 RN/L = 5.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.803	-5.000	-.07060	-.05250	-.00200	.00050	.00010	.01690	.04430
.803	-4.000	-.05940	-.04410	-.00320	.00020	.00000	.01650	.04420
.803	-2.000	-.04050	-.02690	-.00580	.00040	-.00040	.01720	.04280
.803	.000	-.01850	-.01190	-.00720	.00010	-.00040	.01820	.04160
.803	2.000	.01180	.00060	-.00440	.00030	-.00010	.01760	.04130
.803	4.000	.03130	.01410	-.00370	.00180	.00000	.01730	.03990
.803	6.000	.06140	.02590	.00000	.00240	.00000	.01770	.03690
.803	8.000	.08560	.03930	.00110	.00390	-.00020	.01800	.03420
.803	10.000	.11020	.05270	.00480	.00490	-.00030	.01790	.03210
	GRADIENT	.01149	.00739	-.00018	.00011	-.00001	.00010	-.00049

RUN NO. 2025/ 0 RN/L = 6.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.07990	-.05420	-.00610	.00280	-.00020	.02310	.05240
.901	-4.000	-.06710	-.04590	-.00370	.00250	.00000	.02450	.05040
.901	-2.000	-.04400	-.03030	-.00550	.00180	.00000	.02520	.04930
.901	.000	-.01570	-.01490	-.00740	.00180	-.00050	.02510	.04910
.901	2.000	.01430	-.00350	-.00340	.00290	.00000	.02550	.04780
.901	4.000	.04170	.00790	-.00570	.00350	.00000	.02640	.04550
.901	6.000	.07190	.02000	-.00310	.00450	-.00020	.02710	.04330
.901	8.000	.10200	.03170	.00120	.00550	-.00020	.02670	.04080
.901	10.000	.13230	.04260	.00470	.00660	-.00010	.02700	.03820
	GRADIENT	.01357	.00694	.00000	.00008	.00001	.00029	-.00064

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72116) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2023/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.07900	-.04810	-.00250	.00170	-.00040	.04260	.04230
.996	-4.000	-.06530	-.04230	-.00390	.00160	-.00020	.04380	.04200
.996	-2.000	-.04020	-.02770	-.00380	.00060	-.00040	.04370	.04180
.996	.000	-.01110	-.01070	.00180	.00130	-.00030	.04440	.04090
.996	2.000	.01420	.00180	-.00590	.00400	-.00030	.04500	.03940
.996	4.000	.04500	.01230	.00020	.00300	-.00010	.04650	.03690
.996	6.000	.08110	.02210	.00380	.00210	-.00020	.04760	.03320
.996	8.000	.11430	.03330	.00730	.00430	-.00010	.04820	.03200
.996	10.000	.14630	.04420	.00970	.00510	-.00010	.04940	.02860
	GRADIENT	.01367	.00694	.00021	.00023	.00002	.00036	-.00056

RUN NO. 2024/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.08780	-.05130	-.00500	.00260	.00000	.04710	.05690
1.198	-4.000	-.07340	-.04360	-.00500	.00110	-.00010	.04410	.05840
1.198	-2.000	-.04500	-.02800	-.00220	.00090	-.00010	.04200	.06010
1.198	.000	-.01940	-.01210	-.00250	.00020	-.00060	.04140	.06020
1.198	2.000	.00820	.00210	-.00410	.00110	-.00050	.04020	.06010
1.198	4.000	.03170	.01920	-.00330	.00240	-.00040	.04070	.05910
1.198	6.000	.06110	.03630	.00170	.00350	-.00010	.03970	.05890
1.198	8.000	.09910	.04970	.00520	.00430	-.00030	.03760	.05960
1.198	10.000	.13970	.05990	.00910	.00470	-.00020	.03670	.05830
	GRADIENT	.01333	.00778	.00016	-.00001	-.00006	-.00065	.00023

RUN NO. 2170/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-4.000	-.08130	-.03980	.00080	.00120	-.00020	.04860	.04970
1.463	-2.000	-.05410	-.02460	-.00220	.00180	-.00020	.04800	.04970
1.463	.000	-.02910	-.00580	-.00480	.00320	-.00030	.04460	.05250
1.463	2.000	-.00110	.00910	-.00150	.00220	.00010	.04280	.05130
1.463	4.000	.02260	.02550	-.00220	.00370	-.00050	.04660	.05010
1.463	6.000	.05240	.04290	.00350	.00330	-.00010	.04810	.05020
1.463	8.000	.08840	.05570	.00670	.00460	-.00020	.05170	.04680
1.463	10.000	.12490	.06830	.00940	.00610	-.00010	.05100	.04510
1.463	-5.000	-.09500	-.05070	-.00020	.00160	-.00020	.05280	.04740
	GRADIENT	.01304	.00821	-.00026	.00027	-.00002	-.00046	.00012

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72116) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2225/ 0 RN/L = 6.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.957	-5.000	-.12030	-.03010	.00080	.00050	-.00010	.05820	.03010
1.957	-4.000	-.10030	-.02320	.00570	-.00070	.00010	.05740	.02990
1.957	-2.000	-.06780	-.01160	.00490	-.00110	.00000	.05750	.03050
1.957	.000	-.03760	.00260	.00490	-.00080	.00000	.05590	.03180
1.957	2.000	-.01440	.01700	.00280	.00100	-.00030	.05250	.03300
1.957	4.000	.01370	.03420	.00400	.00120	.00000	.05040	.03420
1.957	6.000	.04740	.04960	.00910	.00060	.00000	.04860	.03520
1.957	8.000	.07850	.06240	.00910	.00140	-.00010	.04810	.03510
1.957	10.000	.12460	.06760	.00660	.00500	-.00010	.04970	.03380
	GRADIENT	.01466	.00704	.00007	.00015	-.00001	-.00086	.00049

RUN NO. 2250/ 0 RN/L = 5.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.14340	-.00770	.00120	.00070	.00000	.05120	.01620
2.990	-4.000	-.12140	-.00460	.00340	.00000	.00000	.05050	.01640
2.990	-2.000	-.08120	.00200	.00520	.00000	.00010	.04930	.01700
2.990	.000	-.04460	.01050	.00680	.00080	.00010	.04840	.01750
2.990	2.000	-.01300	.02100	.00800	.00090	.00000	.04800	.01810
2.990	4.000	.01730	.03110	.00700	.00120	-.00030	.04570	.01870
2.990	6.000	.05710	.03980	.01010	.00200	.00010	.04430	.01860
2.990	8.000	.09720	.04390	.01160	.00170	-.00020	.04450	.01860
2.990	10.000	.14640	.04340	.01300	.00270	-.00010	.04610	.01860
	GRADIENT	.01786	.00432	.00066	.00010	-.00002	-.00055	.00028

RUN NO. 2249/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.15630	-.01170	-.03220	.00660	-.00460	.04660	.00150
4.960	-4.000	-.12040	-.00870	-.01640	.00440	-.00260	.04400	.00200
4.960	-2.000	-.06090	-.00230	.00380	.00140	-.00040	.04020	.00240
4.960	.000	-.01510	.00330	.01100	.00060	.00030	.03860	.00270
4.960	2.000	.01890	.00730	.00590	.00220	.00000	.03950	.00280
4.960	4.000	.04850	.01730	.00910	.00190	.00040	.04000	.00310
4.960	6.000	.07740	.02140	.00640	.00280	.00000	.04140	.00340
4.960	8.000	.11090	.02450	.00940	.00250	.00000	.04290	.00350
4.960	10.000	.14830	.02360	.01010	.00270	.00000	.04440	.00360
	GRADIENT	.02267	.00306	.00413	-.00045	.00049	-.00071	.00016

MSFC 545 (1A1) MOD ATP LV-(T5)/(S1)/(01) (R72117) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2062/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.08650	-.04230	.00630	-.00370	.00120	.02370	.02780
.601	-4.000	-.07290	-.03490	.00440	-.00430	-.00010	.01820	.03170
.601	-2.000	-.05570	-.01850	.00550	-.00400	.00120	.01740	.03180
.601	.000	-.02390	-.00400	.00730	-.00320	.00170	.01420	.03270
.601	2.000	-.00940	.00790	.00270	-.00230	.00130	.01730	.02960
.601	4.000	.00480	.02900	.00330	-.00270	.00050	.01230	.03070
.601	6.000	.02580	.04150	.00360	.00060	.00090	.01370	.02900
.601	8.000	.05070	.05520	.00590	.00140	.00000	.01280	.02510
.601	10.000	.07460	.06910	.00990	.00100	.00030	.00870	.02500
	GRADIENT	.01040	.00769	-.00028	.00019	.00002	-.00093	.00010

RUN NO. 2061/ 0 RN/L = 5.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.799	-5.000	-.09820	-.03730	-.00060	.00020	.00030	.01730	.04240
.799	-4.000	-.08450	-.03110	.00010	.00110	.00020	.01950	.04090
.799	-2.000	-.05860	-.01480	.00000	-.00150	.00050	.01540	.04090
.799	.000	-.03960	.00030	-.00230	.00020	.00050	.01800	.03950
.799	2.000	-.01990	.01310	-.00420	.00140	.00010	.01700	.03740
.799	4.000	.00600	.02620	-.00120	.00220	.00040	.01340	.03900
.799	6.000	.03790	.03890	.00280	.00250	.00020	.01000	.03780
.799	8.000	.05550	.05180	.00140	.00380	.00000	.01380	.03190
.799	10.000	.08350	.06400	.00090	.00440	.00000	.01330	.02990
	GRADIENT	.01126	.00715	-.00029	.00020	.00000	-.00039	-.00044

RUN NO. 2060/ 0 RN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.11120	-.03630	-.00890	.00580	.00040	.02000	.05360
.902	-4.000	-.09180	-.03110	-.00790	.00350	.00020	.02200	.04900
.902	-2.000	-.07640	-.01420	-.01140	.00430	.00030	.02150	.04950
.902	.000	-.03920	.00050	-.00130	.00260	.00090	.02220	.04650
.902	2.000	-.01560	.01070	-.00420	.00330	.00060	.02540	.04370
.902	4.000	.02000	.02130	-.00920	.00510	.00040	.02030	.04520
.902	6.000	.04940	.03250	-.00570	.00480	.00020	.02300	.04130
.902	8.000	.07640	.04250	-.00130	.00600	.00060	.02490	.03870
.902	10.000	.10680	.05250	.00090	.00690	.00060	.02360	.03840
	GRADIENT	.01419	.00658	.00030	-.00007	.00003	.00017	-.00088

MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(01) (R72117) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2059/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.998	-5.000	-.10170	-.02620	.00190	.00250	.00050	.04690	.03530
.998	-4.000	-.08550	-.02100	.00570	.00280	.00030	.04950	.02460
.998	-2.000	-.06270	-.00760	-.00170	.00330	.00000	.05080	.02800
.998	.000	-.04050	.00990	.00290	.00430	-.00050	.05470	.02410
.998	2.000	-.00700	.01960	-.00170	.00540	-.00030	.05310	.02550
.998	4.000	.01930	.02520	-.00140	.00610	-.00030	.05540	.02030
.998	6.000	.05880	.03370	.00350	.00480	-.00010	.05190	.01620
.998	8.000	.08510	.04220	.00260	.00490	-.00020	.05620	.01570
.998	10.000	.11200	.05310	.00740	.00510	-.00020	.05500	.01480
	GRADIENT	.01327	.00608	-.00054	.00041	-.00009	.00086	-.00110

RUN NO. 2058/ 0 RN/L = 7.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.195	-5.000	-.11390	-.03330	-.00470	.00170	.00010	.05030	.05450
1.195	-4.000	-.10080	-.02570	-.00530	.00210	-.00010	.05030	.05370
1.195	-2.000	-.07600	-.00830	-.00930	.00230	-.00030	.04900	.05430
1.195	.000	-.04980	.00930	-.00370	.00040	.00000	.05300	.05140
1.195	2.000	-.02060	.02040	-.00740	.00210	-.00040	.04710	.05440
1.195	4.000	.00710	.03610	-.00480	.00320	-.00040	.04490	.05470
1.195	6.000	.02940	.05150	-.00720	.00470	-.00080	.04440	.05380
1.195	8.000	.06310	.06540	-.00480	.00570	-.00020	.04000	.05500
1.195	10.000	.10870	.07570	-.00050	.00650	.00010	.03330	.05760
	GRADIENT	.01343	.00772	-.00000	.00009	-.00005	-.00052	.00001

RUN NO. 2179/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.11710	-.03630	.00180	.00010	-.00020	.05210	.05300
1.462	-4.000	-.09980	-.02720	.00500	-.00020	-.00010	.05140	.05240
1.462	-2.000	-.06940	-.01200	.00290	-.00170	-.00050	.04980	.05430
1.462	.000	-.04610	.00500	.00150	-.00060	-.00040	.04930	.05130
1.462	2.000	-.02640	.02380	-.00380	.00240	-.00040	.04830	.05100
1.462	4.000	-.00270	.04340	.00260	.00270	-.00080	.04670	.05290
1.462	6.000	.02550	.06090	.00430	.00360	-.00040	.04890	.05090
1.462	8.000	.06190	.07220	.00940	.00400	-.00010	.05050	.04750
1.462	10.000	.09690	.08410	.00830	.00560	-.00030	.04720	.04720
	GRADIENT	.01247	.00878	-.00039	.00035	-.00006	-.00056	-.00012

MSFC 545 (IA1) MOD ATP LV-(T5)/(S1)/(O1) (R72117) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2228/ 0 RN/L = 6.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.959	-5.000	-.14480	-.01010	.00630	-.00180	-.00020	.05620	.03470
1.959	-4.000	-.12340	-.00430	.00690	-.00140	-.00010	.05400	.03510
1.959	-2.000	-.09610	.00990	.00420	-.00130	-.00050	.05360	.03580
1.959	.000	-.06850	.02540	.00210	-.00050	-.00040	.05330	.03540
1.959	2.000	-.04200	.03590	.00270	.00000	-.00050	.05090	.03650
1.959	4.000	-.01200	.05240	.00430	.00120	-.00020	.04930	.03610
1.959	6.000	.01690	.06920	.00620	.00100	-.00040	.04750	.03600
1.959	8.000	.05260	.08310	.00880	.00080	-.00060	.04640	.03690
1.959	10.000	.09910	.08640	.00620	.00440	-.00060	.04730	.03730
	GRADIENT	.01434	.00688	-.00038	.00031	-.00002	-.00067	.00016

RUN NO. 2242/ 0 RN/L = 5.37 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.15740	.00480	.00590	.00000	.00010	.04930	.01650
2.990	-4.000	-.13290	.00470	-.00050	.00110	.00010	.05080	.01630
2.990	-2.000	-.09190	.01320	.00370	.00090	.00040	.04760	.01670
2.990	.000	-.05650	.02110	.00290	.00190	.00020	.04730	.01690
2.990	2.000	-.03480	.03340	.00260	.00360	.00070	.04790	.01730
2.990	4.000	-.00520	.04300	.00040	.00380	.00060	.04440	.01830
2.990	6.000	.04170	.04890	.00360	.00360	.00090	.04200	.01810
2.990	8.000	.07980	.05440	.00380	.00410	.00060	.04050	.01760
2.990	10.000	.12590	.05500	.00610	.00350	.00040	.04270	.01820
	GRADIENT	.01665	.00443	-.00026	.00042	.00006	-.00053	.00019

RUN NO. 2241/ 0 RN/L = 4.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.08230	.00100	.04040	.00220	.01060	.04360	.00320
4.960	-4.000	-.07760	.00280	.02790	.00220	.00690	.04150	.00340
4.960	-2.000	-.05970	.00470	.00570	.00290	.00140	.03630	.00340
4.960	.000	-.02830	.00630	-.00560	.00350	-.00060	.03760	.00320
4.960	2.000	.02080	.00920	.00140	.00260	.00170	.04020	.00290
4.960	4.000	.04310	.01300	-.00910	.00650	.00000	.04370	.00280
4.960	6.000	.07560	.02510	.00410	.00670	.00360	.04280	.00390
4.960	8.000	.09950	.02400	-.01180	.00890	.00060	.04410	.00340
4.960	10.000	.13310	.02680	-.00630	.00750	.00000	.04360	.00360
	GRADIENT	.01483	.00124	-.00506	.00036	-.00104	-.00002	-.00006

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72118) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2115/ 0 RN/L = 4.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.06090	-.04790	.00390	-.00320	-.00050	.03380	.02200
.602	-4.000	-.05490	-.04340	.00250	-.00100	-.00080	.03240	.02420
.602	-2.000	-.03690	-.02740	.00060	-.00400	-.00070	.03010	.02490
.602	.000	-.01610	-.01080	-.00630	-.00150	-.00050	.02900	.02520
.602	2.000	.00430	.00500	-.00760	-.00030	-.00100	.02610	.02670
.602	4.000	.02730	.02300	.00700	-.00190	.00000	.02410	.02480
.602	6.000	.04640	.03720	.00680	.00060	-.00040	.01960	.02610
.602	8.000	.07460	.04970	.00570	.00320	-.00030	.01780	.02410
.602	10.000	.10450	.06240	.01230	.00450	-.00020	.01540	.02250
	GRADIENT	.00989	.00798	-.00029	.00016	.00004	-.00105	.00032

RUN NO. 2116/ 0 RN/L = 5.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.799	-5.000	-.08660	-.04510	.00050	.00020	-.00020	.03460	.02990
.799	-4.000	-.07300	-.03580	.00280	-.00040	-.00010	.03180	.03190
.799	-2.000	-.05330	-.01740	.00200	-.00190	-.00040	.03070	.03150
.799	.000	-.02990	-.00420	-.00370	-.00030	-.00010	.02950	.03220
.799	2.000	-.00430	.00660	-.00530	.00160	-.00020	.02820	.03230
.799	4.000	.02120	.02000	-.00310	.00290	-.00030	.02660	.03120
.799	6.000	.04790	.03400	.00270	.00340	-.00040	.02480	.03030
.799	8.000	.07670	.04750	.00750	.00390	.00000	.02350	.02800
.799	10.000	.10510	.05990	.01060	.00520	.00000	.02150	.02630
	GRADIENT	.01183	.00713	-.00076	.00054	-.00001	-.00078	.00011

RUN NO. 2117/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.09220	-.04220	.00710	.00000	.00010	.03420	.04020
.901	-4.000	-.08020	-.03680	.00280	.00000	-.00010	.03390	.04030
.901	-2.000	-.05510	-.02020	-.00300	-.00040	-.00040	.03280	.04040
.901	.000	-.02940	-.00610	-.00460	.00120	-.00030	.03410	.03870
.901	2.000	.00030	.00500	-.00220	.00300	-.00040	.03180	.03860
.901	4.000	.02980	.01680	-.00160	.00440	.00000	.03010	.03760
.901	6.000	.05850	.02870	.00000	.00560	-.00010	.02830	.03630
.901	8.000	.08680	.04030	.00280	.00540	-.00030	.02740	.03490
.901	10.000	.11600	.05230	.00730	.00610	-.00030	.02610	.03420
	GRADIENT	.01353	.00668	-.00087	.00051	-.00002	-.00040	-.00031

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72118) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2119/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.995	-5.000	-.09410	-.03850	.00280	.00110	-.00060	.04770	.03920
.995	-4.000	-.07990	-.03190	.00490	.00010	-.00020	.04720	.04020
.995	-2.000	-.05370	-.01870	.00310	.00000	-.00020	.04960	.03800
.995	.000	-.02740	-.00320	-.00180	.00340	-.00030	.04640	.03800
.995	2.000	.00050	.00920	-.00580	.00600	-.00030	.04490	.03640
.995	4.000	.03190	.01960	.00040	.00420	-.00050	.04440	.03420
.995	6.000	.06560	.03130	.00590	.00270	-.00030	.04700	.03230
.995	8.000	.09500	.04440	.00960	.00540	-.00010	.04650	.03100
.995	10.000	.12940	.05550	.01230	.00590	-.00030	.04450	.02900
	GRADIENT	.01382	.00660	-.00077	.00058	-.00000	-.00042	-.00057

RUN NO. 2118/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.10060	-.04180	.00150	.00080	-.00040	.05400	.05380
1.196	-4.000	-.08700	-.03490	.00000	.00030	-.00030	.05320	.05310
1.196	-2.000	-.05990	-.01930	.00030	-.00030	-.00030	.05120	.05340
1.196	.000	-.03280	-.00230	-.00010	.00000	-.00010	.04900	.05310
1.196	2.000	-.00660	.01280	-.00300	.00140	-.00030	.04440	.05390
1.196	4.000	.01830	.02900	.00000	.00260	-.00030	.04210	.05510
1.196	6.000	.05050	.04480	.00320	.00420	-.00030	.03950	.05520
1.196	8.000	.08460	.05840	.00610	.00530	-.00040	.03600	.05500
1.196	10.000	.11540	.06990	.00760	.00580	-.00100	.03200	.05430
	GRADIENT	.01327	.00792	-.00025	.00021	.00001	-.00137	.00014

RUN NO. 2194/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.10100	-.04790	.00190	.00060	-.00030	.06300	.04610
1.463	-4.000	-.08620	-.03790	.00190	.00050	-.00020	.06100	.04640
1.463	-2.000	-.05710	-.02080	.00270	.00000	-.00010	.05690	.04740
1.463	.000	-.02950	-.00370	.00000	.00060	-.00020	.05230	.04950
1.463	2.000	-.00830	.01370	-.00170	.00250	-.00010	.04970	.05040
1.463	4.000	.01670	.03110	.00080	.00420	-.00020	.04930	.05110
1.463	6.000	.04350	.04890	.00250	.00510	-.00040	.04910	.05160
1.463	8.000	.07860	.06390	.00640	.00590	-.00030	.04870	.04980
1.463	10.000	.11580	.07730	.01000	.00650	-.00020	.04600	.04930
	GRADIENT	.01304	.00871	-.00030	.00039	.00001	-.00163	.00060

MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1) (R72118) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2223/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.953	-5.000	-.12910	-.01920	.00390	-.00030	.00000	.05770	.03380
1.953	-4.000	-.10980	-.01340	.00370	-.00060	.00000	.05640	.03400
1.953	-2.000	-.07840	.00030	.00430	-.00120	.00000	.05520	.03480
1.953	.000	-.04910	.01360	.00240	-.00030	.00000	.05280	.03510
1.953	2.000	-.02380	.02830	.00290	.00050	.00000	.04920	.03600
1.953	4.000	.00510	.04620	.00450	.00110	-.00010	.04840	.03630
1.953	6.000	.03760	.06050	.00750	.00050	.00000	.04570	.03640
1.953	8.000	.07260	.07290	.00910	.00080	.00000	.04400	.03670
1.953	10.000	.11800	.07760	.00740	.00390	.00000	.04350	.03710
	GRADIENT	.01469	.00718	-.00002	.00018	-.00001	-.00109	.00029

RUN NO. 2246/ 0 RN/L = 5.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.14210	-.00540	.00290	-.00010	-.00040	.04870	.01660
2.990	-4.000	-.11910	-.00280	.00500	-.00020	-.00010	.04810	.01680
2.990	-2.000	-.08080	.00460	.00600	.00000	-.00010	.04680	.01720
2.990	.000	-.04180	.01210	.00580	.00110	.00000	.04600	.01770
2.990	2.000	-.01470	.02350	.00640	.00160	.00000	.04510	.01820
2.990	4.000	.01890	.03410	.00770	.00180	.00000	.04260	.01880
2.990	6.000	.05660	.04200	.00880	.00200	.00000	.04040	.01880
2.990	8.000	.09940	.04500	.01180	.00180	.00000	.04140	.01840
2.990	10.000	.15080	.04480	.01580	.00140	.00010	.04270	.01860
	GRADIENT	.01773	.00440	.00042	.00025	.00003	-.00062	.00024

RUN NO. 2245/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.11030	-.00910	.02160	-.00310	.00110	.04650	.00220
4.960	-4.000	-.09330	-.00540	.01620	-.00160	.00070	.04360	.00230
4.960	-2.000	-.05840	.00090	.00740	.00080	.00020	.03940	.00250
4.960	.000	-.02120	.00620	.00320	.00230	.00000	.03740	.00290
4.960	2.000	.02020	.01070	.00740	.00150	.00020	.03850	.00330
4.960	4.000	.05580	.01550	.00890	.00200	.00060	.03950	.00300
4.960	6.000	.07710	.02250	.00460	.00360	.00020	.04200	.00320
4.960	8.000	.10970	.02580	.00930	.00260	.00050	.04240	.00320
4.960	10.000	.14150	.02540	.00640	.00350	.00050	.04330	.00370
	GRADIENT	.01862	.00270	-.00137	.00054	-.00006	-.00077	.00011

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72119) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2106/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.05140	-.05490	.00280	-.00290	-.00090	.03220	.02480
.598	-4.000	-.03620	-.04850	.00410	-.00020	.00010	.03400	.02370
.598	-2.000	-.02230	-.03270	-.00060	-.00370	-.00010	.03230	.02390
.598	.000	-.00350	-.01500	-.00770	-.00130	-.00070	.03010	.02580
.598	2.000	.01510	.00190	-.00750	-.00030	-.00060	.02760	.02600
.598	4.000	.03510	.01770	.00190	-.00210	-.00030	.02600	.02600
.598	6.000	.05760	.03340	.00770	.00010	-.00020	.02150	.02650
.598	8.000	.08150	.04580	.00850	.00330	-.00050	.01950	.02440
.598	10.000	.10530	.05860	.00880	.00590	-.00070	.01630	.02350
	GRADIENT	.00938	.00820	-.00070	.00008	-.00000	-.00083	.00024

RUN NO. 2105/ 0 RN/L = 5.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.801	-5.000	-.08110	-.04870	.00150	.00030	-.00020	.03730	.03050
.801	-4.000	-.06440	-.04120	.00280	-.00160	.00000	.03570	.03030
.801	-2.000	-.04760	-.02370	-.00240	-.00190	-.00010	.03400	.03050
.801	.000	-.01870	-.00960	-.00260	-.00170	.00000	.03280	.03120
.801	2.000	.00090	.00310	-.00800	.00080	-.00050	.03080	.03260
.801	4.000	.02810	.01550	-.00350	.00190	-.00040	.02910	.03230
.801	6.000	.05760	.02980	.00520	.00220	.00000	.02810	.03050
.801	8.000	.08130	.04250	.00690	.00390	.00000	.02640	.02870
.801	10.000	.10750	.05550	.00920	.00500	.00000	.02360	.02740
	GRADIENT	.01184	.00718	-.00089	.00026	-.00004	-.00087	.00026

RUN NO. 2104/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.08350	-.04760	.00450	.00000	.00010	.03500	.04000
.899	-4.000	-.07260	-.04350	.00390	.00070	-.00010	.03610	.03910
.899	-2.000	-.04750	-.02610	-.00190	-.00040	-.00010	.03650	.03940
.899	.000	-.02020	-.01080	.00130	.00060	.00000	.03550	.03860
.899	2.000	.00650	-.00020	-.00360	.00360	.00000	.03340	.03860
.899	4.000	.03450	.01210	-.00410	.00470	-.00040	.03130	.03620
.899	6.000	.06340	.02470	-.00030	.00500	-.00020	.03050	.03670
.899	8.000	.09600	.03620	.00590	.00450	.00000	.03060	.03330
.899	10.000	.12390	.04850	.01040	.00530	.00000	.03000	.03190
	GRADIENT	.01318	.00683	-.00095	.00053	-.00003	-.00045	-.00017

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72119) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2102/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.07930	-.04560	.00650	.00060	.00010	.04790	.03840
.997	-4.000	-.06950	-.03870	.00480	.00080	-.00010	.05030	.03710
.997	-2.000	-.04460	-.02440	-.00240	.00100	-.00030	.05070	.04010
.997	.000	-.01830	-.00800	-.00690	.00470	-.00020	.04850	.04030
.997	2.000	.01040	.00440	-.00510	.00560	.00000	.04810	.03910
.997	4.000	.03940	.01510	.00140	.00430	-.00010	.04880	.03680
.997	6.000	.07300	.02560	.00530	.00370	.00000	.04950	.03230
.997	8.000	.10160	.03730	.00900	.00550	-.00030	.04580	.02930
.997	10.000	.13300	.04910	.01270	.00560	-.00040	.04540	.02590
	GRADIENT	.01327	.00690	-.00087	.00056	-.00001	-.00009	-.00003

RUN NO. 2103/ 0 RN/L = 6.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.08860	-.04860	.00380	.00070	.00010	.05650	.05420
1.197	-4.000	-.07800	-.04090	-.00120	.00150	-.00020	.05630	.05320
1.197	-2.000	-.04870	-.02680	-.00200	.00060	-.00030	.05440	.05360
1.197	.000	-.02430	-.00910	-.00320	.00120	.00000	.05220	.05310
1.197	2.000	.00090	.00590	-.00340	.00200	.00000	.04680	.05380
1.197	4.000	.02910	.02220	-.00060	.00290	-.00030	.04530	.05390
1.197	6.000	.05540	.03900	.00180	.00500	-.00030	.04440	.05330
1.197	8.000	.09070	.05270	.00570	.00510	-.00040	.03980	.05450
1.197	10.000	.12930	.06420	.01020	.00530	-.00020	.03590	.05420
	GRADIENT	.01308	.00789	-.00041	.00020	-.00001	-.00135	.00001

RUN NO. 2191/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.468	-5.000	-.09300	-.05240	.00350	.00060	-.00010	.07170	.04130
1.468	-4.000	-.07960	-.04320	.00370	.00070	-.00030	.07000	.04150
1.468	-2.000	-.04940	-.02780	.00220	.00000	.00000	.06660	.04300
1.468	.000	-.02190	-.01070	.00040	.00060	-.00010	.06020	.04440
1.468	2.000	.00070	.00850	.00050	.00200	-.00030	.05240	.04980
1.468	4.000	.02240	.02630	.00390	.00340	-.00030	.05100	.05100
1.468	6.000	.05150	.04340	.00630	.00590	-.00030	.04920	.05180
1.468	8.000	.08730	.05770	.01040	.00430	.00000	.04630	.05280
1.468	10.000	.12410	.07120	.01310	.00560	.00000	.04260	.05360
	GRADIENT	.01297	.00871	-.00014	.00029	-.00002	-.00251	.00117

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72119) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2226/ 0 RN/L = 6.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.961	-5.000	-.11990	-.02680	.00270	.00020	-.00020	.05710	.03290
1.961	-4.000	-.10050	-.02180	.00400	.00000	-.00010	.05630	.03290
1.961	-2.000	-.06890	-.00930	.00270	-.00020	-.00010	.05500	.03360
1.961	.000	-.04030	.00480	.00090	.00030	-.00020	.05270	.03440
1.961	2.000	-.01450	.01950	.00170	.00120	-.00050	.04990	.03490
1.961	4.000	.01450	.03840	.00370	.00130	-.00040	.04820	.03570
1.961	6.000	.04430	.05360	.00570	.00140	-.00020	.04700	.03600
1.961	8.000	.08100	.06540	.00810	.00150	.00000	.04560	.03640
1.961	10.000	.12840	.07000	.00640	.00460	-.00010	.04550	.03650
	GRADIENT	.01469	.00717	-.00006	.00015	-.00004	-.00102	.00032

RUN NO. 2251/ 0 RN/L = 5.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.13500	-.00880	.00600	-.00040	.00000	.04920	.01660
2.990	-4.000	-.11480	-.00700	.00360	-.00020	-.00050	.04910	.01680
2.990	-2.000	-.07770	-.00050	.00510	-.00020	-.00070	.04750	.01740
2.990	.000	-.03440	.00750	.00690	.00050	.00000	.04630	.01770
2.990	2.000	-.00840	.02080	.00780	.00090	-.00020	.04560	.01800
2.990	4.000	.02390	.03040	.00890	.00110	.00000	.04400	.01870
2.990	6.000	.06290	.03810	.00980	.00170	.00000	.04240	.01870
2.990	8.000	.10770	.04120	.01440	.00040	.00000	.04240	.01850
2.990	10.000	.15680	.04080	.01670	.00060	.00000	.04360	.01850
	GRADIENT	.01775	.00446	.00047	.00018	.00003	-.00056	.00022

RUN NO. 2252/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.15790	-.00970	-.01900	.00810	-.00060	.04970	.00440
4.960	-4.000	-.12120	-.00670	-.00980	.00540	-.00040	.04490	.00410
4.960	-2.000	-.06090	-.00080	.00010	.00210	-.00050	.03830	.00380
4.960	.000	-.01460	.00480	.00380	.00120	-.00060	.03570	.00410
4.960	2.000	.01950	.01050	.00560	.00170	-.00040	.03810	.00510
4.960	4.000	.04870	.01650	.00040	.00410	.00000	.03860	.00470
4.960	6.000	.08130	.02110	.00390	.00240	.00000	.03890	.00520
4.960	8.000	.11650	.02480	.00730	.00350	.00050	.04020	.00500
4.960	10.000	.14690	.02500	.00570	.00450	.00040	.04180	.00520
	GRADIENT	.02287	.00269	.00215	-.00045	.00004	-.00115	.00008

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72120) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2071/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.599	-5.000	-.07760	-.04180	.00550	-.00310	.00020	.02480	.02480
.599	-4.000	-.06460	-.03650	.00370	-.00340	-.00050	.02400	.02610
.599	-2.000	-.04580	-.02010	.00500	-.00390	.00000	.02210	.02720
.599	.000	-.02120	-.00570	.00130	-.00190	.00040	.02000	.02730
.599	2.000	-.00330	.00920	.00150	-.00170	.00010	.01960	.02730
.599	4.000	.01270	.02660	.00380	-.00210	.00000	.01540	.02790
.599	6.000	.03710	.04090	.00660	.00020	.00010	.01490	.02660
.599	8.000	.06060	.05360	.00710	.00180	-.00030	.01320	.02420
.599	10.000	.08580	.06750	.00980	.00210	-.00010	.00970	.02370
	GRADIENT	.01012	.00761	-.00028	.00019	.00002	-.00096	.00028

RUN NO. 2072/ 0 RN/L = 5.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.802	-5.000	-.09510	-.03690	.00050	-.00010	-.00010	.02410	.03550
.802	-4.000	-.08140	-.03060	.00070	.00000	-.00010	.02560	.03430
.802	-2.000	-.05920	-.01370	.00030	-.00130	-.00010	.02270	.03500
.802	.000	-.03790	.00060	-.00350	.00010	.00000	.02360	.03390
.802	2.000	-.01320	.01250	-.00460	.00160	-.00010	.02270	.03280
.802	4.000	.01340	.02590	-.00020	.00190	.00000	.01930	.03370
.802	6.000	.04060	.03850	.00260	.00230	.00000	.01670	.03220
.802	8.000	.06360	.05170	.00250	.00330	-.00020	.01670	.02900
.802	10.000	.09060	.06400	.00340	.00430	-.00010	.01520	.02770
	GRADIENT	.01182	.00703	-.00035	.00026	.00001	-.00050	-.00022

RUN NO. 2073/ 0 RN/L = 8.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.10660	-.03510	-.00330	.00310	.00000	.02760	.04510
.901	-4.000	-.09180	-.02920	-.00380	.00210	.00000	.02830	.04320
.901	-2.000	-.06970	-.01280	-.00670	.00200	.00000	.02830	.04310
.901	.000	-.03880	.00060	-.00350	.00180	.00000	.02920	.04180
.901	2.000	-.00960	.01070	-.00330	.00260	.00000	.02950	.03950
.901	4.000	.02080	.02140	-.00580	.00420	.00000	.02650	.03940
.901	6.000	.05060	.03270	-.00300	.00470	-.00010	.02710	.03680
.901	8.000	.07860	.04430	.00100	.00510	.00000	.02630	.03570
.901	10.000	.10730	.05550	.00390	.00590	.00000	.02430	.03540
	GRADIENT	.01409	.00638	-.00011	.00012	.00000	-.00003	-.00062

MSFC 545 (IA1) MOD ATP LV-(T5)/(S1)/(O1) (R72120) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	15.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2074/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.10280	-.03130	.00010	.00190	.00000	.04560	.04510
.999	-4.000	-.08920	-.02500	.00240	.00180	-.00010	.04700	.04000
.999	-2.000	-.06370	-.01080	-.00010	.00150	-.00010	.04810	.04130
.999	.000	-.03810	.00590	.00090	.00240	-.00040	.04950	.03900
.999	2.000	-.01050	.01790	-.00340	.00450	-.00040	.04790	.03830
.999	4.000	.01880	.02690	-.00060	.00430	-.00050	.04850	.03420
.999	6.000	.05360	.03790	.00410	.00350	-.00030	.04670	.03030
.999	8.000	.08240	.04980	.00460	.00470	-.00020	.04780	.03060
.999	10.000	.11560	.06070	.00780	.00520	-.00030	.04550	.03000
	GRADIENT	.01339	.00670	-.00032	.00033	-.00006	.00027	-.00093

RUN NO. 2075/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.201	-5.000	-.11460	-.03600	-.00240	.00140	-.00020	.05200	.05550
1.201	-4.000	-.09980	-.02840	-.00140	.00120	-.00010	.05140	.05510
1.201	-2.000	-.07480	-.01160	-.00430	.00070	-.00040	.05020	.05480
1.201	.000	-.04730	.00580	-.00050	-.00020	-.00010	.05140	.05290
1.201	2.000	-.02020	.01990	-.00380	.00150	-.00030	.04690	.05430
1.201	4.000	.00600	.03640	-.00180	.00280	-.00040	.04420	.05500
1.201	6.000	.03290	.05240	-.00110	.00390	-.00060	.04230	.05500
1.201	8.000	.06570	.06670	.00050	.00510	-.00040	.03870	.05550
1.201	10.000	.10500	.07800	.00350	.00590	-.00030	.03360	.05670
	GRADIENT	.01337	.00806	-.00000	.00012	-.00002	-.00080	-.00010

RUN NO. 2182/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.11380	-.03870	.00140	.00020	-.00020	.05530	.05080
1.462	-4.000	-.09690	-.02930	.00320	.00000	-.00010	.05380	.05090
1.462	-2.000	-.06780	-.01310	.00240	-.00100	-.00030	.05080	.05260
1.462	.000	-.04260	.00420	-.00010	.00000	-.00030	.04830	.05190
1.462	2.000	-.02040	.02150	-.00320	.00210	-.00040	.04630	.05180
1.462	4.000	.00300	.04080	.00150	.00310	-.00040	.04460	.05300
1.462	6.000	.03020	.05900	.00280	.00430	-.00040	.04570	.05250
1.462	8.000	.06470	.07280	.00660	.00470	-.00020	.04600	.05030
1.462	10.000	.10020	.08590	.00760	.00580	-.00020	.04310	.04980
	GRADIENT	.01284	.00873	-.00034	.00035	-.00003	-.00116	.00020

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72120) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2227/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.961	-5.000	-.14100	-.01030	.00510	-.00100	-.00010	.05530	.03490
1.961	-4.000	-.12090	-.00510	.00480	-.00080	-.00010	.05370	.03510
1.961	-2.000	-.09070	.00860	.00350	-.00090	-.00030	.05230	.03560
1.961	.000	-.06170	.02190	.00200	-.00020	-.00020	.05090	.03540
1.961	2.000	-.03600	.03580	.00280	.00030	-.00020	.04780	.03650
1.961	4.000	-.00730	.05400	.00420	.00140	-.00010	.04640	.03640
1.961	6.000	.02260	.07000	.00610	.00130	-.00020	.04420	.03650
1.961	8.000	.05800	.08290	.00810	.00130	-.00030	.04270	.03690
1.961	10.000	.10450	.08670	.00690	.00430	-.00030	.04290	.03720
	GRADIENT	.01459	.00706	-.00017	.00025	-.00000	-.00098	.00018

RUN NO. 2243/ 0 RN/L = 5.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.000	-.14850	.00070	.00570	-.00030	.00000	.04840	.01670
2.990	-4.000	-.12530	.00100	.00230	.00020	.00000	.04870	.01680
2.990	-2.000	-.08450	.00810	.00450	.00040	.00010	.04680	.01730
2.990	.000	-.04780	.01640	.00430	.00130	.00000	.04550	.01760
2.990	2.000	-.02200	.02820	.00490	.00230	.00030	.04510	.01810
2.990	4.000	.00940	.03790	.00440	.00230	.00010	.04250	.01880
2.990	6.000	.04990	.04470	.00470	.00300	.00020	.04100	.01860
2.990	8.000	.09260	.04960	.00720	.00320	.00020	.03910	.01850
2.990	10.000	.14010	.05060	.01010	.00280	.00010	.04010	.01890
	GRADIENT	.01738	.00429	.00004	.00031	.00002	-.00065	.00023

RUN NO. 2244/ 0 RN/L = 4.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.09850	-.00750	.01630	-.00020	.00410	.04450	.00170
4.960	-4.000	-.08700	-.00340	.01280	.00040	.00260	.04230	.00210
4.960	-2.000	-.05910	.00270	.00620	.00180	.00080	.03900	.00270
4.960	.000	-.02460	.00720	.00250	.00270	.00000	.03780	.00290
4.960	2.000	.01770	.01030	.00330	.00260	.00050	.03930	.00290
4.960	4.000	.04770	.01530	.00040	.00390	.00000	.04050	.00320
4.960	6.000	.07920	.02380	.00710	.00360	.00130	.04110	.00360
4.960	8.000	.10990	.02420	.00240	.00430	.00010	.04250	.00360
4.960	10.000	.14420	.02500	.00450	.00420	.00000	.04260	.00380
	GRADIENT	.01669	.00243	-.00168	.00043	-.00042	-.00043	.00015

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72121) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1326.0000 IN. YMRP = .0000
BREF = 1326.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1329/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.600	-.01260	-.01800	.04160	.01040	-.00070	.03620	.02780
.600	-3.590	-.01170	-.01480	.02530	.00580	-.00090	.03740	.02450
.600	-1.540	-.01300	-.01140	.01490	.00010	-.00010	.03290	.02840
.600	.480	-.00990	-.01070	.00310	-.00670	-.00010	.03930	.02200
.600	2.540	-.01130	-.01050	-.01180	-.01050	.00000	.03800	.02230
.600	4.550	-.01060	-.01180	-.02930	-.01460	-.00080	.03840	.02230
.600	6.560	-.00280	-.01530	-.04870	-.01510	-.00050	.03220	.02800
.600	.490	-.01020	-.01280	-.00260	-.00590	-.00130	.03820	.02290
	GRADIENT	.00019	.00034	-.00667	-.00252	.00002	.00035	-.00051

RUN NO. 1330/ 0 RN/L = 5.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.801	-5.660	-.02090	-.00980	.05010	.00610	-.00060	.03600	.03630
.801	-3.620	-.02370	-.00590	.03080	.00440	-.00060	.03930	.03130
.801	-1.560	-.02020	-.00290	.01460	.00240	-.00060	.04090	.02840
.801	.480	-.02000	-.00190	-.00010	-.00180	-.00050	.04220	.02710
.801	2.550	-.02130	.00070	-.01780	-.00350	-.00080	.03590	.03280
.801	4.580	-.01820	-.00250	-.03650	-.00520	-.00060	.03450	.03490
.801	6.620	-.02110	-.00480	-.06120	-.00430	-.00060	.03270	.04160
.801	.480	-.02000	-.00120	.00140	-.00180	-.00060	.04110	.02840
	GRADIENT	.00048	.00051	-.00814	-.00122	-.00005	-.00071	.00057

RUN NO. 1331/ 0 RN/L = 6.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.710	-.02310	-.01270	.05480	.00580	-.00040	.03760	.04590
.902	-3.670	-.02560	-.00760	.03650	.00450	.00000	.03910	.04250
.902	-1.580	-.02390	-.00450	.01810	.00310	-.00050	.04360	.03560
.902	.470	-.02380	-.00460	.00000	.00190	-.00040	.04310	.03650
.902	2.530	-.02260	-.00340	-.02020	.00050	-.00040	.03720	.04360
.902	4.590	-.02130	-.00460	-.03980	-.00110	-.00060	.03610	.04660
.902	6.660	-.02130	-.00650	-.06310	-.00110	-.00040	.03360	.05240
.902	.470	-.02120	-.00450	.00070	.00180	-.00010	.04320	.03490
	GRADIENT	.00048	.00035	-.00925	-.00067	-.00005	-.00060	.00080

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72121) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1333/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.001	-5.740	-.02530	-.00880	.05960	.00450	.00000	.05150	.05140
1.001	-3.690	-.02660	-.00550	.03630	.00480	-.00020	.05420	.04820
1.001	-1.580	-.02770	-.00160	.01670	.00470	-.00030	.05540	.04470
1.001	.470	-.02650	.00060	-.00220	.00340	-.00010	.05530	.04360
1.001	2.540	-.02420	-.00020	-.02120	.00090	-.00020	.05550	.05080
1.001	4.600	-.02320	-.00120	-.04100	-.00070	-.00010	.05050	.05190
1.001	6.670	-.02590	-.00120	-.06380	-.00280	.00000	.04920	.06070
1.001	.470	-.02750	-.00010	-.00220	.00350	-.00020	.05190	.04600
	GRADIENT	.00050	.00048	-.00930	-.00071	.00001	-.00035	.00065

RUN NO. 1332/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.780	-.03870	-.00730	.06060	.00870	-.00030	.05730	.05910
1.198	-3.720	-.03920	-.00240	.03930	.00570	-.00010	.05780	.05500
1.198	-1.590	-.04080	.00050	.02010	.00170	-.00010	.06080	.05110
1.198	.480	-.03900	.00180	.00260	-.00240	-.00020	.06070	.05180
1.198	2.570	-.03970	.00030	-.01990	-.00540	-.00050	.05710	.05580
1.198	4.650	-.03930	-.00150	-.03910	-.00970	-.00020	.05780	.05800
1.198	6.720	-.04300	-.00020	-.06250	-.01190	-.00030	.05780	.06080
1.198	.480	-.03910	.00050	.00150	-.00230	-.00010	.06090	.05130
	GRADIENT	.00004	.00008	-.00942	-.00181	-.00003	-.00018	.00051

RUN NO. 1307/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.464	-5.770	-.03780	-.00780	.06090	.01260	-.00040	.06430	.04700
1.464	-3.730	-.03960	-.00110	.03660	.00900	-.00020	.06240	.04520
1.464	-1.590	-.04040	.00180	.01590	.00350	-.00010	.06170	.04380
1.464	.500	-.04010	.00320	-.00370	-.00190	-.00020	.06180	.04330
1.464	2.610	-.03770	.00350	-.02130	-.00800	-.00010	.06310	.04410
1.464	4.700	-.04080	.00240	-.04680	-.01220	-.00020	.06320	.04570
1.464	6.810	-.03970	-.00010	-.07580	-.01470	-.00030	.06120	.04860
1.464	.470	-.04110	.00460	-.00320	-.00170	-.00040	.06060	.04410
	GRADIENT	.00001	.00041	-.00969	-.00256	.00000	.00014	.00006

MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1) (R72121) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1304/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.966	-5.860	-.05370	.01060	.07300	.01170	-.00020	.05930	.03400
1.966	-3.760	-.04940	.01220	.04450	.00940	-.00020	.05740	.03340
1.966	-1.600	-.05070	.01380	.01790	.00460	-.00030	.05840	.03350
1.966	.520	-.04880	.01500	-.00320	-.00230	-.00020	.05850	.03360
1.966	2.630	-.05230	.01440	-.02860	-.00670	-.00020	.05850	.03320
1.966	4.750	-.05680	.01760	-.05400	-.01110	-.00010	.05910	.03320
1.966	6.870	-.05920	.01680	-.08720	-.01430	-.00050	.06050	.03240
1.966	.450	-.05000	.01540	-.00220	-.00220	-.00030	.05880	.03320
	GRADIENT	-.00077	.00054	-.01146	-.00246	.00001	.00016	-.00003

RUN NO. 1290/ 0 RN/L = 5.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-5.750	-.04100	.01510	.07740	.01090	-.00050	.05200	.01720
2.990	-3.690	-.03580	.01660	.05060	.00720	-.00040	.05150	.01660
2.990	-1.580	-.03800	.01750	.01950	.00430	-.00030	.05160	.01620
2.990	.500	-.03880	.01860	-.00800	-.00040	-.00060	.05110	.01620
2.990	2.600	-.03360	.01910	-.03120	-.00590	-.00010	.05120	.01680
2.990	4.660	-.04000	.02030	-.06160	-.00880	-.00020	.05130	.01660
2.990	6.760	-.04220	.02010	-.09470	-.01040	-.00010	.05190	.01620
2.990	.490	-.03730	.01840	-.00650	-.00080	.00000	.05050	.01600
	GRADIENT	-.00019	.00043	-.01318	-.00202	.00005	-.00004	.00003

RUN NO. 1289/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.590	-.02290	.00990	.06230	.01800	-.00090	.04220	.00430
4.960	-3.600	-.02170	.00900	.04090	.01200	-.00110	.03980	.00420
4.960	-1.530	-.01400	.00750	.01960	.00610	-.00060	.03760	.00440
4.960	.480	-.01500	.00960	-.00010	-.00290	-.00040	.03720	.00430
4.960	2.540	-.00900	.00920	-.02620	-.00950	.00020	.03770	.00420
4.960	4.560	-.01120	.00770	-.05260	-.01450	-.00130	.04040	.00410
4.960	6.580	-.01910	.01390	-.06890	-.02010	-.00030	.04180	.00470
4.960	.480	-.00670	.00750	.00150	-.00380	.00010	.03710	.00440
	GRADIENT	.00128	-.00004	-.01142	-.00336	.00002	.00006	-.00002

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72122) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2133/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.13170	-.03930	.00640	-.00670	.00050	.07770	.06630
.600	-4.000	-.10340	-.03710	.00340	-.00600	-.00070	.07300	.06940
.600	-2.000	-.06160	-.02860	.00300	-.00530	-.00100	.07310	.06570
.600	.000	-.01920	-.02400	-.00190	-.00340	-.00130	.06800	.06670
.600	2.000	.02870	-.01850	-.00040	-.00370	-.00080	.06650	.06430
.600	4.000	.07230	-.01000	.00160	-.00420	-.00060	.06030	.06540
.600	6.000	.11930	-.00240	-.00250	-.00200	-.00080	.05610	.06550
.600	8.000	.16830	.00440	-.00120	-.00170	-.00010	.04940	.06630
.600	10.000	.22990	.00900	.00170	-.00110	.00070	.04240	.06570
	GRADIENT	.02240	.00319	-.00059	.00032	-.00008	-.00170	-.00031

RUN NO. 2011/ 1 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.17230	-.04420	-.01430	.01050	.00190	.13030	.06910
.903	-4.000	-.14800	-.03910	-.01380	.01010	.00170	.13120	.06770
.903	-2.000	-.09090	-.03170	-.00970	.00770	.00100	.12340	.07030
.903	.000	-.03510	-.02770	-.00910	.00470	.00050	.12080	.06890
.903	2.000	.02050	-.02460	-.00690	.00280	-.00020	.11440	.06880
.903	4.000	.07400	-.02080	-.00320	.00050	-.00060	.11110	.06530
.903	6.000	.13060	-.01460	.00240	-.00300	-.00050	.10280	.06590
.903	8.000	.19210	-.01010	.00250	-.00420	-.00070	.09190	.06650
.903	10.000	.26230	-.01060	.00160	-.00210	-.00040	.07770	.06870
	GRADIENT	.02760	.00249	.00118	-.00116	-.00029	-.00231	-.00027

RUN NO. 2013/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.16540	-.03620	-.00260	.00020	.00100	.13070	.06930
1.000	-4.000	-.13610	-.03130	-.00350	.00030	.00050	.12830	.06920
1.000	-2.000	-.08200	-.02260	-.00070	-.00110	.00020	.13170	.06690
1.000	.000	-.03240	-.01390	.00140	-.00270	-.00010	.12860	.06610
1.000	2.000	.01670	-.00920	.00440	-.00270	-.00050	.12230	.06570
1.000	4.000	.06430	-.00450	.00520	-.00310	-.00080	.11980	.06410
1.000	6.000	.12680	-.00210	.00640	-.00320	-.00080	.11130	.06380
1.000	8.000	.19730	-.00590	.00830	-.00210	-.00030	.10110	.06410
1.000	10.000	.27840	-.01540	.00990	.00000	.00040	.08870	.06660
	GRADIENT	.02543	.00357	.00101	-.00042	-.00019	-.00118	-.00057

MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1) (R72122) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2012/ 0 RN/L = 6.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.16760	-.04950	-.01370	.01060	.00060	.16180	.08430
1.196	-4.000	-.14720	-.03960	-.01230	.01040	.00020	.16090	.08460
1.196	-2.000	-.09440	-.02380	-.00790	.00780	-.00010	.16040	.08560
1.196	.000	-.04610	-.00840	-.00620	.00610	-.00100	.15590	.08500
1.196	2.000	-.00710	.01000	-.00540	.00610	-.00100	.14690	.08280
1.196	4.000	.05960	.02230	-.00040	.00330	-.00120	.14410	.08080
1.196	6.000	.09790	.02940	.00520	.00000	-.00090	.13830	.08080
1.196	8.000	.16780	.02880	.00990	-.00200	-.00070	.12850	.08250
1.196	10.000	.25590	.01880	.01210	-.00210	.00000	.11960	.08380
	GRADIENT	.02314	.00803	.00146	-.00079	-.00021	-.00211	-.00034

RUN NO. 2165/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.16100	-.04240	-.00820	.00660	-.00020	.16350	.07430
1.462	-4.000	-.15540	-.03240	-.00850	.00620	-.00050	.16420	.07170
1.462	-2.000	-.10370	-.01410	-.00800	.00540	-.00070	.16370	.06500
1.462	.000	-.05770	.00160	-.00630	.00400	-.00050	.16410	.06630
1.462	2.000	-.00720	.01770	-.00290	.00320	-.00020	.15800	.06450
1.462	4.000	.04410	.02410	-.00270	.00260	.00000	.15480	.06660
1.462	6.000	.10660	.02590	-.00060	.00330	.00010	.15240	.07020
1.462	8.000	.16870	.03240	.00240	.00390	.00050	.14990	.07110
1.462	10.000	.24640	.03650	.00740	.00400	.00090	.14690	.07290
	GRADIENT	.02485	.00762	.00072	-.00045	.00004	-.00098	-.00086

RUN NO. 2200/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.963	-5.000	-.23870	.00660	.00560	-.00420	-.00170	.15320	.04410
1.963	-4.000	-.20680	.01010	.00410	-.00430	-.00160	.15590	.04410
1.963	-2.000	-.14950	.02170	.00340	-.00430	-.00160	.15790	.04510
1.963	.000	-.09560	.03920	.01020	-.00610	-.00130	.15360	.04670
1.963	2.000	-.04550	.05680	.01020	-.00560	-.00070	.14440	.05120
1.963	4.000	.00960	.06260	.00950	-.00640	-.00020	.14040	.05280
1.963	6.000	.08180	.06440	.01380	-.00620	.00050	.13950	.05410
1.963	8.000	.16700	.06160	.01570	-.00420	.00090	.14140	.05410
1.963	10.000	.26830	.05330	.01830	-.00120	.00160	.14000	.05500
	GRADIENT	.02732	.00676	.00071	-.00026	.00017	-.00165	.00107

MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(O1) (R72122) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2279/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.18010	.03220	.03700	-.00870	.00220	.09180	.00300
4.960	-4.000	-.16340	.03310	.02360	-.00520	.00120	.09450	.00450
4.960	-2.000	-.12130	.03410	.00670	-.00060	.00000	.09890	.00620
4.960	.000	-.06800	.03520	.00290	.00110	-.00010	.10100	.00680
4.960	2.000	-.00500	.03720	.01060	-.00020	.00030	.10030	.00650
4.960	4.000	.05160	.03070	.01170	.00060	.00110	.09900	.00710
4.960	6.000	.12270	.01870	.01550	-.00220	.00050	.09660	.00710
4.960	8.000	.19050	.00600	.01660	-.00210	.00060	.09610	.00680
4.960	10.000	.26240	-.00840	.01740	-.00150	.00070	.09850	.00690
	GRADIENT	.02610	.00007	-.00243	.00093	-.00011	.00082	.00040

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72123) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2044/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.14580	-.03680	-.01640	.00670	.00030	.08260	.06360
.601	-4.000	-.10830	-.03360	-.01040	.00650	.00080	.07890	.06550
.601	-2.000	-.06200	-.02530	-.00910	.00510	.00000	.07640	.06560
.601	.000	-.01110	-.02320	-.00860	.00440	.00000	.07370	.06420
.601	2.000	.03630	-.01660	-.00720	.00400	.00000	.06950	.06350
.601	4.000	.07660	-.00860	-.00720	.00450	-.00040	.06430	.06480
.601	6.000	.12390	-.00260	-.00910	.00490	-.00020	.06220	.06230
.601	8.000	.17870	.00390	-.00730	.00380	-.00020	.05560	.06200
.601	10.000	.23770	.00850	-.00410	.00350	.00040	.04830	.06160
	GRADIENT	.02444	.00298	.00081	-.00029	-.00009	-.00187	-.00004

RUN NO. 2043/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.904	-5.000	-.16430	-.03410	-.01290	.00260	-.00120	.13600	.05310
.904	-4.000	-.13030	-.03010	-.00830	.00390	-.00010	.12890	.04040
.904	-2.000	-.07890	-.02630	-.00920	.00480	-.00030	.12440	.04420
.904	.000	-.02070	-.02600	-.00540	.00280	-.00020	.11680	.04930
.904	2.000	.03390	-.02760	-.00590	.00350	-.00070	.10790	.05420
.904	4.000	.08700	-.02390	-.00320	.00280	-.00050	.10160	.05610
.904	6.000	.14070	-.01940	-.00340	.00240	-.00030	.09560	.05690
.904	8.000	.19800	-.01450	-.00340	.00290	.00000	.08720	.06070
.904	10.000	.26720	-.01390	.00040	.00350	.00070	.07320	.06550
	GRADIENT	.02776	.00087	.00089	-.00005	.00002	-.00370	.00244

RUN NO. 2041/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.15210	-.04100	-.00860	.00190	-.00040	.12520	.06600
.999	-4.000	-.12730	-.03680	-.01050	.00340	-.00050	.12840	.06550
.999	-2.000	-.07540	-.02840	-.00870	.00530	-.00050	.12720	.06440
.999	.000	-.01750	-.02240	-.00540	.00330	-.00020	.12090	.06340
.999	2.000	.03840	-.02160	.00000	.00050	-.00030	.11510	.06390
.999	4.000	.09280	-.01940	.00110	.00010	-.00060	.11200	.06320
.999	6.000	.15170	-.01630	.00060	.00120	-.00040	.10630	.06300
.999	8.000	.21910	-.01790	.00170	.00300	.00040	.10100	.06310
.999	10.000	.29590	-.02450	.00520	.00490	.00150	.08900	.06530
	GRADIENT	.02741	.00240	.00132	-.00033	-.00000	-.00178	-.00030

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72123) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2042/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-5.000	-.15280	-.05880	-.01430	.00490	-.00130	.15960	.07780
1.200	-4.000	-.13250	-.05340	-.01540	.00580	-.00190	.15970	.07990
1.200	-2.000	-.08120	-.03950	-.01370	.00580	-.00110	.16050	.07880
1.200	.000	-.02320	-.02510	-.00810	.00550	-.00100	.15660	.08040
1.200	2.000	.02110	-.00970	-.00500	.00510	-.00120	.14630	.07940
1.200	4.000	.07010	.00250	-.00310	.00440	-.00080	.14240	.07850
1.200	6.000	.12670	.01050	-.00190	.00440	-.00060	.13800	.07830
1.200	8.000	.19310	.01250	.00220	.00310	.00000	.12910	.08030
1.200	10.000	.27490	.00670	.00690	.00230	.00100	.11960	.08180
	GRADIENT	.02515	.00697	.00145	-.00009	.00008	-.00205	.00004

RUN NO. 2174/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.459	-5.000	-.15540	-.05790	-.00050	.00660	.00080	.16430	.07010
1.459	-4.000	-.13250	-.05040	-.00500	.00640	-.00010	.16670	.06930
1.459	-2.000	-.07940	-.03540	-.00300	.00500	-.00060	.16730	.06900
1.459	.000	-.03790	-.01330	-.00470	.00490	-.00090	.16130	.06700
1.459	2.000	.01200	.00000	.00000	.00300	-.00120	.15780	.06680
1.459	4.000	.06810	.00500	.00170	.00280	-.00090	.15620	.06850
1.459	6.000	.13020	.00700	.00320	.00250	-.00030	.15520	.07040
1.459	8.000	.19390	.01420	.00550	.00280	.00010	.15180	.07160
1.459	10.000	.27090	.01990	.00900	.00300	.00060	.14840	.07370
	GRADIENT	.02451	.00748	.00042	-.00045	-.00018	-.00117	-.00026

RUN NO. 2201/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.960	-5.000	-.20490	-.01910	.00060	.00240	-.00230	.14050	.04740
1.960	-4.000	-.17630	-.01200	.00160	.00060	-.00290	.14830	.04720
1.960	-2.000	-.11600	.00220	.00540	.00010	-.00060	.15860	.04270
1.960	.000	-.06690	.02050	.00890	-.00230	-.00080	.15510	.04730
1.960	2.000	-.02190	.03980	.00740	-.00190	-.00030	.14810	.04960
1.960	4.000	.03490	.04540	.00940	-.00390	.00000	.14340	.05060
1.960	6.000	.10560	.04720	.01150	-.00370	.00020	.14260	.05190
1.960	8.000	.18770	.04650	.01450	-.00260	.00070	.14360	.05320
1.960	10.000	.28400	.04140	.01900	-.00100	.00180	.14150	.05520
	GRADIENT	.02627	.00763	.00099	-.00063	.00030	.00003	.00046

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72123) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2281/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.20480	.01370	.00690	-.00880	-.00550	.11940	.00180
4.960	-4.000	-.17220	.02190	.00920	-.00570	-.00530	.10860	.00400
4.960	-2.000	-.11200	.02970	.00940	-.00160	-.00100	.09830	.00660
4.960	.000	-.05390	.03100	.00930	.00000	-.00010	.09660	.00760
4.960	2.000	.00430	.02820	.01170	-.00100	-.00010	.10040	.00740
4.960	4.000	.06180	.02470	.01160	-.00040	.00030	.09910	.00750
4.960	6.000	.13250	.01500	.01590	-.00220	.00180	.09610	.00750
4.960	8.000	.19770	.00150	.01600	-.00220	.00080	.09600	.00750
4.960	10.000	.26810	-.01340	.01540	-.00110	.00050	.09830	.00740
	GRADIENT	.02951	.00105	.00046	.00065	.00057	-.00184	.00059

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72124) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2045/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.13820	-.02860	-.00820	.00460	.00030	.08520	.06350
.601	-4.000	-.11680	-.02290	-.00810	.00460	-.00020	.08700	.06100
.601	-2.000	-.06570	-.01830	-.00150	.00350	.00030	.08650	.05730
.601	.000	-.01580	-.01610	-.00830	.00660	-.00050	.08210	.05650
.601	2.000	.02060	-.00770	-.00470	.00430	-.00050	.07760	.05510
.601	4.000	.06900	-.00020	-.00590	.00460	-.00060	.07760	.05080
.601	6.000	.11330	.00720	-.02010	.01130	-.00180	.07400	.05200
.601	8.000	.17160	.01830	-.00770	.00830	-.00100	.06590	.05370
.601	10.000	.23240	.02030	-.00350	.00650	-.00070	.05980	.05180
	GRADIENT	.02303	.00291	.00021	.00003	-.00009	-.00112	-.00125

RUN NO. 2046/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.904	-5.000	-.18700	-.02520	-.01560	.01360	.00330	.12410	.07890
.904	-4.000	-.16680	-.01920	-.01900	.01330	.00180	.12590	.07390
.904	-2.000	-.11050	-.01140	-.01000	.00850	.00120	.11860	.07790
.904	.000	-.05400	-.00620	-.01170	.00610	.00070	.11940	.06950
.904	2.000	.00060	-.00560	-.00620	.00350	-.00060	.11020	.06900
.904	4.000	.05280	-.00010	-.00140	.00230	-.00110	.10500	.06570
.904	6.000	.11310	.00280	.00440	-.00080	-.00050	.09860	.06710
.904	8.000	.18230	.00380	-.00010	.00080	-.00080	.08730	.06970
.904	10.000	.25640	.00040	-.00430	.00500	-.00040	.07380	.07230
	GRADIENT	.02709	.00259	.00169	-.00136	-.00045	-.00222	-.00136

RUN NO. 2047/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.18950	-.02090	-.01030	.00410	.00170	.13390	.06630
.999	-4.000	-.16080	-.01520	-.00650	.00280	.00120	.13020	.06640
.999	-2.000	-.10660	-.00400	-.00340	.00080	.00060	.13300	.06870
.999	.000	-.06140	.00590	.00160	-.00260	-.00040	.13140	.06660
.999	2.000	-.00860	.00900	.00290	-.00340	-.00070	.12860	.06110
.999	4.000	.05160	.00750	.00600	-.00530	-.00140	.12150	.05920
.999	6.000	.11760	.00620	.00650	-.00580	-.00150	.11870	.05910
.999	8.000	.18930	-.00050	-.00080	-.00160	-.00120	.10810	.05770
.999	10.000	.27450	-.01110	-.00280	.00210	-.00040	.09570	.06410
	GRADIENT	.02625	.00340	.00174	-.00106	-.00034	-.00106	-.00085

MSFC 845 (1A1) MOD ATP LV-(T3)(S1)/(01) (R72124) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2048/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.19420	-.03140	-.01780	.01580	.00190	.16180	.08840
1.199	-4.000	-.17330	-.02110	-.01520	.01460	.00150	.16130	.08760
1.199	-2.000	-.11850	-.00460	-.00730	.00920	.00060	.16150	.08550
1.199	.000	-.06710	.00980	-.00590	.00580	-.00080	.16000	.08360
1.199	2.000	-.03050	.02890	-.00360	.00510	-.00110	.15200	.08020
1.199	4.000	.01580	.04270	.00140	.00120	-.00150	.14830	.07800
1.199	6.000	.07800	.04430	.00820	-.00090	-.00140	.14420	.07640
1.199	8.000	.15070	.03700	.00610	-.00110	-.00130	.13670	.07770
1.199	10.000	.24140	.02550	.00250	.00140	-.00060	.12500	.08230
	GRADIENT	.02352	.00821	.00201	-.00161	-.00040	-.00152	-.00118

RUN NO. 2175/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.20700	-.02520	-.01340	.00790	-.00020	.15730	.07900
1.460	-4.000	-.17640	-.01530	-.00950	.00700	.00000	.15600	.07630
1.460	-2.000	-.13320	.00520	-.01340	.00730	-.00090	.15530	.06960
1.460	.000	-.08160	.01940	-.00850	.00490	-.00020	.15610	.07150
1.460	2.000	-.03610	.04130	-.00260	.00270	.00000	.15530	.06540
1.460	4.000	.01210	.04840	.00010	.00220	-.00010	.15400	.06300
1.460	6.000	.07150	.05020	.00040	.00120	-.00120	.15120	.06580
1.460	8.000	.13260	.05480	.00460	.00080	-.00130	.14620	.06960
1.460	10.000	.21210	.05710	.01150	.00080	-.00090	.14120	.07280
	GRADIENT	.02418	.00835	.00144	-.00068	.00002	-.00027	-.00169

RUN NO. 2204/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.959	-5.000	-.26710	.02940	.00270	-.00320	-.00110	.15290	.04570
1.959	-4.000	-.23120	.03100	.00040	-.00180	-.00060	.15030	.04680
1.959	-2.000	-.17390	.04170	-.00090	-.00020	-.00170	.14600	.05090
1.959	.000	-.12510	.06200	.00060	.00010	-.00120	.14290	.05350
1.959	2.000	-.07300	.08030	.00480	-.00150	-.00030	.13330	.05570
1.959	4.000	-.01900	.08920	.00880	-.00480	.00000	.13240	.05740
1.959	6.000	.04610	.09260	.00800	-.00420	.00020	.13360	.05900
1.959	8.000	.12710	.08960	.00830	-.00020	.00060	.12840	.06130
1.959	10.000	.23230	.07450	.00970	.00440	.00140	.12480	.06080
	GRADIENT	.02704	.00725	.00074	-.00013	.00011	-.00241	.00135

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72124) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2277/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-2.000	-.14260	.05600	.01940	-.00510	.00090	.10380	.00590
4.960	.000	-.07870	.05040	.01470	-.00100	.00080	.10170	.00680
4.960	2.000	-.01150	.04880	.02030	.00120	.00150	.10070	.00690
4.960	4.000	.03500	.04570	.02150	-.00010	.00090	.09880	.00740
4.960	6.000	.09510	.03360	.01440	-.00220	-.00060	.09460	.00790
4.960	8.000	.18280	.01590	.02420	-.00400	.00000	.09360	.00780
4.960	10.000	.24370	.00040	.02280	-.00190	.00140	.10020	.00780
	GRADIENT	.03000	-.00162	.00060	.00086	.00004	-.00080	.00023

MSFC 545 (IA1) MOD ATP LV-(T5)(S1)/(O1) (R72125) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2132/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.13300	-.03530	.00180	-.00450	.00020	.07570	.06520
.600	-4.000	-.10540	-.03430	.00020	-.00460	-.00060	.07680	.05910
.600	-2.000	-.05950	-.02640	.00290	-.00580	-.00100	.07590	.06030
.600	.000	-.00990	-.02490	-.00220	-.00500	-.00090	.07320	.05880
.600	2.000	.03040	-.01440	.00370	-.00630	-.00010	.06700	.06060
.600	4.000	.06960	-.00950	-.00210	-.00370	-.00050	.06480	.05990
.600	6.000	.12140	.00170	.00210	-.00380	.00000	.05760	.06150
.600	8.000	.17420	.00930	.00620	-.00310	.00100	.05300	.06030
.600	10.000	.23100	.01210	.00000	.00010	.00110	.04940	.05630
	GRADIENT	.02255	.00294	-.00021	.00000	-.00002	-.00147	-.00031

RUN NO. 2131/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.16890	-.03740	-.00410	-.00250	-.00010	.10920	.07180
.902	-4.000	-.14180	-.03210	-.00450	-.00200	-.00030	.10710	.07130
.902	-2.000	-.08790	-.02610	-.00080	-.00490	-.00050	.10140	.07210
.902	.000	-.02980	-.02000	.00450	-.00820	-.00110	.09230	.07200
.902	2.000	.01980	-.01900	.00630	-.00930	-.00070	.08480	.07080
.902	4.000	.07580	-.01170	.00850	-.01080	-.00040	.07770	.07140
.902	6.000	.12620	-.00230	.00910	-.00970	.00000	.06990	.07400
.902	8.000	.17740	.00460	.00780	-.00510	.00050	.06100	.07500
.902	10.000	.23940	.00600	.01040	-.00040	.00160	.04680	.07760
	GRADIENT	.02717	.00264	.00156	-.00103	-.00005	-.00361	-.00006

RUN NO. 2129/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.15540	-.03820	-.00300	-.00010	-.00050	.12760	.07040
1.000	-4.000	-.13090	-.03100	.00000	-.00090	-.00040	.13090	.06820
1.000	-2.000	-.07860	-.02370	-.00080	-.00180	-.00110	.13010	.06540
1.000	.000	-.02330	-.01730	.00290	-.00340	-.00100	.12140	.06480
1.000	2.000	.02470	-.01570	.00160	-.00300	-.00080	.11410	.06240
1.000	4.000	.07640	-.00260	.00320	-.00340	-.00010	.11770	.06370
1.000	6.000	.13720	-.00250	.00340	.00000	.00020	.11040	.06690
1.000	8.000	.19970	-.00550	.00470	.00340	.00090	.09460	.06700
1.000	10.000	.27560	-.01380	.00550	.00550	.00190	.07850	.06980
	GRADIENT	.02587	.00351	.00059	-.00037	.00002	-.00172	-.00077

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72125) (22 FEB 7.

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2130/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-5.000	-.16400	-.05030	-.00800	.00370	-.00060	.16370	.07850
1.200	-4.000	-.13810	-.04210	-.00650	.00300	-.00080	.16210	.07910
1.200	-2.000	-.08660	-.02740	-.00540	.00170	-.00110	.16000	.07840
1.200	.000	-.03900	-.01200	-.00210	-.00020	-.00110	.15510	.07820
1.200	2.000	.00680	.00050	.00280	-.00300	-.00080	.14300	.07780
1.200	4.000	.05490	.01260	.00210	-.00240	-.00060	.13800	.07740
1.200	6.000	.10710	.02320	.00390	-.00290	-.00020	.13210	.07860
1.200	8.000	.17260	.02730	.00690	-.00330	.00040	.12500	.07980
1.200	10.000	.25640	.02190	.00920	-.00220	.00150	.11370	.08240
	GRADIENT	.02423	.00702	.00126	-.00078	.00000	-.00297	-.00015

RUN NO. 2198/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.17870	-.04260	-.00540	.00440	-.00040	.16460	.07290
1.463	-4.000	-.15140	-.03350	-.00570	.00400	-.00070	.16420	.07190
1.463	-2.000	-.09930	-.01740	-.00420	.00320	-.00070	.16140	.07140
1.463	.000	-.05330	-.00010	-.00320	.00200	-.00070	.15820	.07230
1.463	2.000	-.00760	.01860	-.00030	.00150	-.00070	.14830	.07430
1.463	4.000	.04400	.02640	.00030	.00090	-.00050	.14580	.07530
1.463	6.000	.10160	.03190	.00320	.00130	.00000	.14590	.07530
1.463	8.000	.16050	.04270	.00490	.00190	.00040	.14580	.07680
1.463	10.000	.23450	.05140	.00860	.00220	.00080	.14400	.07830
	GRADIENT	.02444	.00796	.00071	-.00040	-.00000	-.00226	.00033

RUN NO. 2199/ 0 RN/L = 6.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.955	-5.000	-.23000	.00200	.00400	-.00290	-.00170	.15040	.04670
1.955	-4.000	-.19780	.00790	.00370	-.00300	-.00170	.15320	.04690
1.955	-2.000	-.13970	.02230	.00520	-.00300	-.00140	.15440	.04780
1.955	.000	-.08790	.04060	.00720	-.00340	-.00120	.15120	.05020
1.955	2.000	-.04080	.05910	.00790	-.00350	-.00070	.14580	.05190
1.955	4.000	.01260	.07000	.01010	-.00540	.00000	.14300	.05360
1.955	6.000	.07760	.07830	.01340	-.00540	.00020	.14150	.05560
1.955	8.000	.15340	.08140	.01480	-.00250	.00070	.13680	.05950
1.955	10.000	.25360	.07370	.01780	.00100	.00220	.13230	.06140
	GRADIENT	.02663	.00789	.00070	-.00023	.00018	-.00101	.00081

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72125) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2280/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.21600	.02870	-.00810	-.00540	-.00370	.10620	.00490
4.960	-4.000	-.18280	.03170	-.00260	-.00370	-.00270	.10530	.00510
4.960	-2.000	-.11680	.03590	.00820	-.00160	-.00090	.10340	.00530
4.960	.000	-.05390	.03770	.01550	-.00110	-.00010	.10130	.00570
4.960	2.000	-.00090	.03680	.01240	-.00200	-.00110	.10010	.00680
4.960	4.000	.06420	.02670	.01170	-.00120	-.00030	.09740	.00690
4.960	6.000	.12800	.01500	.01260	-.00200	.00000	.09690	.00790
4.960	8.000	.19260	.00210	.01160	-.00140	-.00050	.09470	.00730
4.960	10.000	.27100	-.00930	.02010	-.00210	.00010	.09480	.00750
	GRADIENT	.03087	.00005	.00225	.00039	.00033	-.00095	.00024

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72126) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1326.0000 IN.	YMRP =	.0000		
BREF =	1326.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2089/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.13420	-.03470	-.01150	.00410	.00000	.08960	.06200
.600	-4.000	-.11000	-.03250	-.00980	.00270	.00000	.09000	.06020
.600	-2.000	-.05980	-.02540	-.00560	.00050	.00020	.08720	.05790
.600	.000	-.01080	-.02320	-.00630	.00000	.00030	.08370	.05810
.600	2.000	.03350	-.01620	-.00780	.00260	.00060	.07830	.05890
.600	4.000	.08360	-.00980	-.00670	.00370	.00070	.07270	.05990
.600	6.000	.13130	-.00400	-.00500	.00290	.00100	.07030	.05700
.600	8.000	.18990	.00220	-.00040	.00180	.00230	.06280	.05750
.600	10.000	.24300	.00740	-.00450	.00540	.00280	.05540	.05640
	GRADIENT	.02412	.00270	.00042	-.00002	.00008	-.00192	-.00019

RUN NO. 2090/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.16130	-.03600	-.01160	.00450	.00100	.11490	.06720
.901	-4.000	-.13530	-.03040	-.01170	.00410	.00060	.11180	.06940
.901	-2.000	-.08050	-.02610	-.01150	.00310	.00020	.10550	.07220
.901	.000	-.02810	-.02190	-.00640	.00110	.00050	.09700	.07480
.901	2.000	.02530	-.02170	-.00240	.00000	.00090	.09070	.07430
.901	4.000	.07990	-.01890	-.00420	.00030	.00070	.08420	.07490
.901	6.000	.13250	-.01110	-.00270	.00000	.00160	.07650	.07700
.901	8.000	.18010	-.00120	-.00030	.00210	.00210	.06790	.07680
.901	10.000	.24380	.00050	.00660	.00400	.00310	.05190	.08070
	GRADIENT	.02678	.00174	.00109	-.00054	.00000	-.00347	.00084

RUN NO. 2091/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.14810	-.04410	-.01060	.00580	.00040	.13320	.06870
.999	-4.000	-.12000	-.03760	-.00950	.00590	.00030	.13310	.06780
.999	-2.000	-.06740	-.02720	-.00770	.00440	.00020	.13410	.06990
.999	.000	-.01510	-.02100	-.00560	.00370	.00030	.13240	.06860
.999	2.000	.03640	-.01960	-.00420	.00380	.00110	.12440	.06770
.999	4.000	.08590	-.01100	-.00090	.00370	.00170	.12230	.06490
.999	6.000	.14150	-.00740	-.00350	.00550	.00190	.11650	.06400
.999	8.000	.20550	-.00850	.00180	.00670	.00270	.10490	.06430
.999	10.000	.28580	-.01760	.00640	.00880	.00400	.08630	.06770
	GRADIENT	.02600	.00342	.00102	-.00027	.00014	-.00130	-.00033

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72126) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2092/ 0 RN/L = 6.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.15860	-.05260	-.01290	.00840	.00010	.16600	.07750
1.199	-4.000	-.12900	-.04610	-.01250	.00860	.00020	.16570	.07790
1.199	-2.000	-.07820	-.03100	-.01060	.00790	.00030	.16460	.07780
1.199	.000	-.02680	-.01720	-.00760	.00690	.00090	.16020	.07640
1.199	2.000	.02070	-.00870	-.00580	.00420	.00050	.14890	.07590
1.199	4.000	.06850	.00490	-.00540	.00540	.00060	.14430	.07490
1.199	6.000	.12350	.01500	-.00430	.00600	.00100	.13900	.07520
1.199	8.000	.18140	.02170	-.00030	.00460	.00170	.13090	.07670
1.199	10.000	.26050	.01730	.00480	.00330	.00300	.11870	.07950
	GRADIENT	.02512	.00635	.00093	-.00046	.00006	-.00256	-.00032

RUN NO. 2187/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.16450	-.05580	-.00800	.00760	.00010	.16630	.07290
1.463	-4.000	-.13320	-.04670	-.00470	.00650	.00020	.16580	.07290
1.463	-2.000	-.07600	-.03330	-.00450	.00580	-.00020	.16290	.07500
1.463	.000	-.02700	-.01870	-.00300	.00400	-.00060	.15860	.07510
1.463	2.000	.02270	-.00420	-.00030	.00400	-.00090	.14970	.07930
1.463	4.000	.07470	.00190	.00120	.00300	-.00080	.15040	.07740
1.463	6.000	.13310	.00870	.00670	.00180	.00020	.15130	.07530
1.463	8.000	.18850	.02260	.00790	.00170	.00090	.14900	.07600
1.463	10.000	.25750	.03440	.01020	.00170	.00110	.14560	.07860
	GRADIENT	.02628	.00659	.00092	-.00049	-.00013	-.00205	.00065

RUN NO. 2202/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.958	-5.000	-.20750	-.01540	.00030	.00210	-.00200	.14410	.04850
1.958	-4.000	-.17700	-.00780	.00070	.00100	-.00230	.14830	.04870
1.958	-2.000	-.11680	.00750	.00530	.00040	-.00080	.15350	.04720
1.958	.000	-.07010	.02710	.00500	-.00030	-.00100	.15070	.04970
1.958	2.000	-.02070	.04410	.00510	-.00120	-.00070	.14260	.05180
1.958	4.000	.03250	.05440	.00670	-.00240	.00000	.14110	.05240
1.958	6.000	.09510	.06410	.00970	-.00230	.00040	.14030	.05500
1.958	8.000	.16810	.06820	.01260	-.00070	.00080	.13680	.05950
1.958	10.000	.26520	.06310	.01790	.00110	.00220	.13160	.06260
	GRADIENT	.02632	.00806	.00068	-.00045	.00023	-.00062	.00049

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72126) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2282/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.19620	.03240	.01330	-.00720	-.00190	.10530	.00670
4.960	-4.000	-.16490	.03210	.01210	-.00490	-.00110	.10300	.00690
4.960	-2.000	-.10550	.03030	.00940	-.00150	-.00020	.10180	.00680
4.960	.000	-.04960	.02910	.00730	.00030	.00000	.10210	.00650
4.960	2.000	-.00110	.03070	.00310	.00130	-.00080	.10240	.00650
4.960	4.000	.07160	.02300	.01290	-.00110	.00030	.09710	.00750
4.960	6.000	.14150	.01060	.01460	-.00220	.00030	.09610	.00780
4.960	8.000	.20180	-.00220	.01250	-.00170	.00010	.09510	.00760
4.960	10.000	.27100	-.01350	.01620	-.00060	.00100	.09720	.00740
	GRADIENT	.02900	-.00082	-.00045	.00075	.00018	-.00064	.00004

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72127) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2088/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.15290	-.02020	-.00700	.00290	.00020	.08360	.06050
.600	-4.000	-.12670	-.01790	-.00600	.00250	-.00010	.08430	.05910
.600	-2.000	-.07770	-.01300	-.00330	.00230	.00000	.08410	.05670
.600	.000	-.02710	-.00960	-.00780	.00420	-.00030	.07980	.05560
.600	2.000	.01630	-.00220	-.00340	.00300	.00000	.07450	.05590
.600	4.000	.06150	.00380	-.00630	.00410	-.00030	.07240	.05400
.600	6.000	.11260	.01030	-.00920	.00620	-.00050	.06810	.05450
.600	8.000	.16340	.01950	-.00550	.00550	.00000	.06070	.05570
.600	10.000	.22080	.02420	-.00430	.00590	.00050	.05320	.05600
	GRADIENT	.02383	.00263	.00009	.00015	-.00004	-.00141	-.00065

RUN NO. 2087/ 0 RN/L = 6.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.16930	-.02100	-.01030	.00710	.00180	.11560	.07550
.901	-4.000	-.16450	-.01590	-.01140	.00660	.00100	.11630	.07190
.901	-2.000	-.11020	-.00840	-.00550	.00320	.00050	.11140	.07290
.901	.000	-.05480	-.00510	-.00470	.00110	.00010	.10930	.06840
.901	2.000	-.00050	-.00200	-.00260	-.00010	-.00050	.10140	.06750
.901	4.000	.05300	.00260	.00020	-.00070	-.00050	.09590	.06630
.901	6.000	.10930	.00820	.00210	-.00110	-.00020	.09060	.06710
.901	8.000	.17050	.01200	.00020	.00080	.00010	.08160	.06870
.901	10.000	.24040	.01130	.00000	.00380	.00100	.07130	.07030
	GRADIENT	.02708	.00250	.00123	-.00094	-.00025	-.00227	-.00096

RUN NO. 2086/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.18390	-.01860	-.00600	.00210	.00070	.13280	.06730
.999	-4.000	-.15600	-.01280	-.00270	.00080	.00050	.13180	.06710
.999	-2.000	-.10340	-.00570	-.00120	-.00080	.00010	.13290	.06670
.999	.000	-.05490	.00540	.00300	-.00310	-.00040	.12860	.06500
.999	2.000	-.00390	.00770	.00390	-.00370	-.00050	.12350	.06150
.999	4.000	.05350	.00960	.00520	-.00410	-.00050	.11910	.05950
.999	6.000	.11570	.01020	.00530	-.00320	-.00030	.11520	.05970
.999	8.000	.18360	.00780	.00420	-.00120	.00020	.10580	.06100
.999	10.000	.26120	.00210	.00580	.00080	.00110	.09500	.06500
	GRADIENT	.02602	.00321	.00121	-.00071	-.00014	-.00153	-.00090

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72127) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2085/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.18850	-.03240	-.01280	.01000	.00070	.16330	.08300
1.197	-4.000	-.16470	-.02340	-.01120	.00920	.00040	.16270	.08210
1.197	-2.000	-.11180	-.00760	-.00630	.00600	.00000	.16190	.08070
1.197	.000	-.06230	.00700	-.00400	.00340	-.00070	.15780	.08000
1.197	2.000	-.02200	.02440	-.00050	.00190	-.00070	.14760	.07850
1.197	4.000	.02320	.03790	.00100	.00040	-.00090	.14280	.07760
1.197	6.000	.08100	.04310	.00500	-.00050	-.00050	.13820	.07730
1.197	8.000	.14930	.04290	.00540	.00010	-.00010	.13060	.07940
1.197	10.000	.23020	.03860	.00530	.00250	.00070	.12130	.08300
	GRADIENT	.02359	.00783	.00158	-.00111	-.00018	-.00238	-.00059

RUN NO. 2186/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.20370	-.02500	-.01040	.00670	-.00030	.16060	.07630
1.460	-4.000	-.17600	-.01440	-.00850	.00620	-.00030	.15960	.07450
1.460	-2.000	-.12710	.00380	-.00930	.00570	-.00080	.15700	.07090
1.460	.000	-.07980	.02030	-.00660	.00420	-.00050	.15530	.07330
1.460	2.000	-.03390	.04010	-.00250	.00300	-.00030	.15030	.07080
1.460	4.000	.01700	.04780	-.00090	.00260	-.00040	.14780	.07070
1.460	6.000	.07480	.05310	.00040	.00230	-.00060	.14690	.07280
1.460	8.000	.13700	.06000	.00300	.00280	-.00040	.14440	.07370
1.460	10.000	.21950	.06150	.00630	.00430	.00020	.14130	.07330
	GRADIENT	.02423	.00833	.00105	-.00049	-.00000	-.00145	-.00054

RUN NO. 2203/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.963	-5.000	-.25510	.02240	.00350	-.00360	-.00130	.15070	.04700
1.963	-4.000	-.22000	.02580	.00210	-.00260	-.00090	.14980	.04770
1.963	-2.000	-.16310	.03870	.00170	-.00160	-.00150	.14700	.05040
1.963	.000	-.11290	.05880	.00330	-.00100	-.00120	.14350	.05280
1.963	2.000	-.06300	.07700	.00520	-.00140	-.00030	.13590	.05480
1.963	4.000	-.01320	.09070	.00750	-.00340	.00000	.13550	.05640
1.963	6.000	.04880	.09960	.00790	-.00250	.00020	.13570	.05810
1.963	8.000	.12710	.10130	.00850	.00140	.00080	.13200	.05980
1.963	10.000	.23330	.08790	.00960	.00610	.00170	.13080	.05820
	GRADIENT	.02652	.00798	.00050	.00006	.00013	-.00188	.00109

MSFC 545 (1A1) MOD ATP LV-(T3)(S1)/(01) (R72127) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2278/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.19990	.05800	.04010	-.01180	.00080	.10480	.00400
4.960	-4.000	-.17960	.05630	.02880	-.00840	.00040	.10560	.00490
4.960	-2.000	-.13090	.05320	.01490	-.00330	.00010	.10500	.00620
4.960	.000	-.07400	.05010	.01010	-.00030	.00030	.10280	.00690
4.960	2.000	-.01030	.04660	.01280	.00060	.00060	.10080	.00690
4.960	4.000	.04630	.04140	.01660	-.00100	.00060	.09760	.00720
4.960	6.000	.10810	.03070	.01530	-.00170	.00060	.09610	.00740
4.960	8.000	.18310	.01550	.01800	-.00190	.00060	.09560	.00790
4.960	10.000	.24860	.00020	.01640	-.00060	.00120	.09880	.00790
	GRADIENT	.02774	-.00178	-.00248	.00125	.00000	-.00083	.00034

MSFC 548 (1A1) MOD ATP LV-(T3)(S1)/(O1) (R72128) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	12.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1320/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.620	-.01410	-.03050	.08100	-.01750	-.00420	.10420	.04390
.598	-3.600	-.01510	-.02650	.05240	-.01230	-.00280	.10460	.04270
.598	-1.550	-.01350	-.02090	.02720	-.00740	-.00110	.10360	.04350
.598	.480	-.00970	-.02010	-.00770	.00290	.00010	.10250	.04560
.598	2.540	-.01290	-.01750	-.03280	.00660	.00110	.09950	.04630
.598	4.580	-.00290	-.02270	-.06580	.01220	.00160	.10030	.04650
.598	6.580	.00730	-.02530	-.09220	.01610	.00250	.09890	.04990
.598	.480	-.01430	-.01790	-.00780	.00210	-.00020	.09820	.04780
	GRADIENT	.00122	.00054	-.01449	.00308	.00054	-.00062	.00061

RUN NO. 1319/ 0 RN/L = 6.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.710	-.02620	-.01840	.10480	-.03060	-.00670	.11190	.07220
.902	-3.680	-.02430	-.01520	.07130	-.02250	-.00450	.11260	.06980
.902	-1.570	-.02780	-.01240	.03340	-.01290	-.00270	.11370	.06790
.902	.490	-.02600	-.01060	-.00530	.00040	-.00110	.11600	.06450
.902	2.580	-.02160	-.01190	-.03990	.00940	.00030	.11620	.06430
.902	4.640	-.01580	-.01390	-.07370	.01830	.00210	.11570	.06520
.902	6.690	-.01390	-.01360	-.10970	.02860	.00380	.11720	.06710
.902	.480	-.02470	-.00950	-.00260	-.00020	-.00090	.11370	.06550
	GRADIENT	.00111	.00015	-.01748	.00500	.00078	.00042	-.00062

RUN NO. 1317/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.740	-.02970	-.01450	.11310	-.03540	-.00690	.13680	.07570
.999	-3.690	-.03070	-.01280	.07430	-.02620	-.00510	.13980	.07590
.999	-1.570	-.03150	-.00850	.03400	-.01420	-.00320	.14230	.07420
.999	.490	-.02960	-.00710	-.00710	.00170	-.00100	.14570	.07130
.999	2.590	-.02910	-.00840	-.04880	.01640	.00090	.14470	.06780
.999	4.680	-.02520	-.00980	-.08980	.02750	.00280	.14810	.06880
.999	6.720	-.02530	-.00660	-.12510	.03470	.00380	.13910	.06610
.999	.490	-.03230	-.00660	-.00780	.00170	-.00090	.14410	.06470
	GRADIENT	.00064	.00029	-.01966	.00660	.00095	.00091	-.00099

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(C4) (RT2120) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1318/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.195	-5.780	-.05610	-.00560	.11610	-.03490	-.00780	.15890	.08720
1.195	-3.720	-.05080	-.00310	.07960	-.02770	-.00540	.15830	.08620
1.195	-1.560	-.05290	.00050	.03740	-.01540	-.00320	.16240	.08460
1.195	.500	-.05470	.00210	-.00430	-.00190	-.00100	.16390	.08360
1.195	2.610	-.05150	.00190	-.04530	.00970	.00060	.16190	.08230
1.195	4.710	-.04920	.00030	-.08880	.02250	.00300	.16260	.08200
1.195	6.780	-.05370	.00190	-.13020	.03140	.00460	.16240	.08410
1.195	.500	-.05490	.00160	-.00440	-.00260	-.00120	.16520	.08220
	GRADIENT	.00022	.00039	-.01995	.00597	.00098	.00039	-.00051

RUN NO. 1311/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.830	-.06890	.00670	.11970	-.03240	-.00590	.16700	.07620
1.460	-3.710	-.06840	.01020	.07800	-.02590	-.00420	.16360	.07320
1.460	-1.570	-.06410	.01250	.03760	-.01490	-.00220	.16310	.07080
1.460	.500	-.06510	.01400	-.00580	-.00170	-.00100	.16570	.06800
1.460	2.630	-.06910	.01870	-.05090	.01170	.00010	.16670	.06890
1.460	4.740	-.06820	.01830	-.09440	.02280	.00180	.16730	.06980
1.460	6.860	-.06760	.01930	-.13180	.02780	.00370	.16930	.06890
1.460	.480	-.06710	.01640	-.00370	-.00250	-.00110	.16260	.06860
	GRADIENT	-.00022	.00106	-.02053	.00588	.00068	.00052	-.00041

RUN NO. 1301/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.959	-5.860	-.09440	.03610	.11560	-.02150	-.00530	.15160	.05530
1.959	-3.760	-.09050	.03680	.07170	-.01160	-.00340	.14780	.05360
1.959	-1.590	-.09050	.03820	.02950	-.00360	-.00210	.14720	.05250
1.959	.520	-.08990	.04000	-.01190	.00510	-.00030	.14830	.05090
1.959	2.640	-.09280	.04090	-.05280	.01270	.00110	.15070	.05070
1.959	4.770	-.09250	.04280	-.09580	.02150	.00260	.15500	.04960
1.959	6.920	-.09040	.04200	-.14330	.02810	.00380	.15860	.04870
1.959	.500	-.08570	.03820	-.01200	.00490	-.00040	.14800	.05000
	GRADIENT	-.00030	.00069	-.01960	.00387	.00071	.00084	-.00048

MSFC 545 (IA1) MOD ATP LV-(T3)(S1)/(O1) (R72128) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 12.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1296/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.620	-.05290	.03170	.10160	-.01240	-.00150	.10530	.00740
4.960	-3.610	-.04750	.03280	.07110	-.00610	-.00030	.10180	.00730
4.960	-1.550	-.04880	.03690	.03250	.00060	.00000	.09990	.00740
4.960	.480	-.05450	.03590	-.00800	.00060	.00000	.10020	.00750
4.960	2.550	-.05000	.03540	-.04680	.00320	-.00010	.09960	.00750
4.960	4.570	-.04120	.03400	-.08040	.01250	.00070	.10130	.00790
4.960	6.590	-.04610	.03370	-.12560	.02060	-.00010	.10660	.00750
4.960	.480	-.04780	.03680	.00000	-.00150	.00060	.09870	.00820
	GRADIENT	.00056	.00004	-.01869	.00194	.00009	-.00006	.00006

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72129) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2017/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.07690	-.04460	-.00750	-.00010	-.00020	.00310	.03640
.602	-4.000	-.05780	-.03760	-.00030	-.00080	.00020	.00230	.03620
.602	-2.000	-.03860	-.02560	-.00640	-.00040	.00000	.00000	.03770
.602	.000	-.02070	-.01170	-.00720	.00120	.00020	-.00030	.03660
.602	2.000	.00370	.00430	-.00340	.00170	.00030	.00080	.03490
.602	4.000	.01220	.01940	-.00790	.00320	.00000	-.00180	.03500
.602	6.000	.04060	.03320	-.00120	.00270	.00040	-.00480	.03260
.602	8.000	.06600	.04420	-.00370	.00490	.00010	-.00620	.02900
.602	10.000	.09390	.05510	-.00220	.00550	-.00010	-.01100	.02990
	GRADIENT	.00967	.00708	-.00023	.00041	.00002	-.00044	-.00019

RUN NO. 2016/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.09710	-.03600	-.00920	.00140	.00000	.00850	.04830
.900	-4.000	-.08450	-.03210	-.00850	.00180	.00000	.00810	.04810
.900	-2.000	-.05600	-.01970	-.00390	-.00060	.00000	.00600	.04760
.900	.000	-.02860	-.00710	-.00390	-.00060	.00010	.00730	.04640
.900	2.000	-.00600	.00260	-.01140	.00220	-.00040	.00700	.04450
.900	4.000	.02410	.01080	-.00530	.00220	.00000	.00700	.04180
.900	6.000	.05180	.02250	-.00100	.00250	.00010	.00730	.03990
.900	8.000	.07730	.03320	-.00380	.00550	-.00010	.00770	.03700
.900	10.000	.10620	.04430	-.00220	.00700	-.00020	.00690	.03470
	GRADIENT	.01337	.00540	.00014	.00009	-.00002	-.00014	-.00070

RUN NO. 2014/ 0 RN/L = 6.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.09490	-.03550	-.00550	.00060	-.00060	.02160	.04200
.999	-4.000	-.08020	-.03060	-.00390	.00110	-.00010	.02320	.04060
.999	-2.000	-.05350	-.01710	-.00020	.00020	-.00010	.02520	.04030
.999	.000	-.02780	-.00400	-.00370	.00060	-.00010	.02660	.03900
.999	2.000	-.00050	.00740	-.00480	.00280	.00000	.02820	.03720
.999	4.000	.02470	.01410	-.00360	.00300	-.00030	.03240	.03340
.999	6.000	.05830	.02250	.00160	.00170	-.00030	.03400	.02870
.999	8.000	.09170	.03170	.00460	.00280	.00000	.03710	.02870
.999	10.000	.12340	.04120	.00700	.00400	.00000	.03670	.02630
	GRADIENT	.01326	.00576	.00002	.00027	.00002	.00108	-.00084

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72129) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1326.0000 IN. YMRP = .0000
BREF = 1326.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2015/ 0 RN/L = 6.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.10240	-.03890	-.00650	.00130	-.00010	.04220	.05610
1.198	-4.000	-.08540	-.03150	-.00270	.00070	.00010	.04040	.05740
1.198	-2.000	-.05940	-.01950	-.00430	-.00010	-.00010	.03770	.05960
1.198	.000	-.03460	-.00420	-.00460	.00020	.00000	.03670	.05950
1.198	2.000	-.01320	.01040	-.00350	.00100	.00000	.03000	.06040
1.198	4.000	.00850	.02430	-.00450	.00270	.00000	.02800	.05970
1.198	6.000	.03750	.03850	-.00160	.00350	-.00010	.02540	.06070
1.198	8.000	.07720	.04960	-.00040	.00540	-.00010	.02490	.05870
1.198	10.000	.11920	.05870	.00270	.00630	-.00020	.02510	.05650
	GRADIENT	.01218	.00704	.00008	.00014	.00000	-.00159	.00040

RUN NO. 2168/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.11230	-.03760	-.00140	.00110	-.00010	.04510	.05300
1.462	-4.000	-.09550	-.03040	-.00240	.00150	.00000	.04510	.05160
1.462	-2.000	-.06540	-.01610	-.00090	.00130	.00000	.04710	.04920
1.462	.000	-.03430	-.00130	-.00360	.00090	-.00020	.04980	.04500
1.462	2.000	-.01330	.01470	-.00440	.00290	.00000	.05580	.03860
1.462	4.000	.01210	.02870	-.00330	.00240	-.00030	.05710	.03730
1.462	6.000	.04100	.04350	.00270	.00270	.00010	.05520	.03920
1.462	8.000	.07460	.05510	.00460	.00500	.00000	.05460	.04200
1.462	10.000	.11130	.06650	.00580	.00660	-.00010	.05100	.04320
	GRADIENT	.01379	.00741	-.00028	.00016	-.00002	.00148	-.00188

RUN NO. 2233/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.956	-5.000	-.13240	-.01510	.00330	-.00140	-.00050	.05820	.02860
1.956	-4.000	-.11210	-.01020	.00620	-.00160	.00000	.05730	.02860
1.956	-2.000	-.08140	.00100	.00340	-.00170	-.00030	.05690	.02980
1.956	.000	-.05200	.01440	.00310	-.00090	-.00040	.05340	.03140
1.956	2.000	-.02360	.02510	.00480	.00010	-.00020	.05080	.03240
1.956	4.000	.00350	.04120	.00460	.00040	-.00020	.04790	.03410
1.956	6.000	.03630	.05530	.00840	.00050	-.00020	.04490	.03560
1.956	8.000	.07090	.06540	.01040	.00120	-.00010	.04370	.03660
1.956	10.000	.11700	.06900	.00890	.00430	-.00020	.04550	.03480
	GRADIENT	.01492	.00619	.00001	.00024	.00001	-.00116	.00063

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72129) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2236/ 0 RN/L = 4.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.12230	.00100	.01780	-.00680	-.00280	.03950	.00260
4.960	-4.000	-.10480	.00290	.01180	-.00360	-.00150	.03840	.00290
4.960	-2.000	-.06800	.00730	.00560	.00050	.00010	.03690	.00340
4.960	.000	-.03080	.01200	.00470	.00250	.00070	.03640	.00370
4.960	2.000	.00320	.01660	.00640	.00280	.00010	.03750	.00370
4.960	4.000	.04150	.01910	.01000	.00230	.00030	.03810	.00410
4.960	6.000	.06700	.02470	.00150	.00660	.00070	.04000	.00440
4.960	8.000	.10050	.02310	.00450	.00450	.00000	.04270	.00430
4.960	10.000	.13860	.02140	.00640	.00420	.00000	.04350	.00440
	GRADIENT	.01816	.00210	-.00078	.00099	.00031	-.00014	.00015

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72130) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2028/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.05110	-.05650	-.00500	.00220	.00030	.00830	.03200
.601	-4.000	-.04010	-.04790	-.00200	.00040	.00000	.00460	.03460
.601	-2.000	-.02060	-.03380	-.00020	-.00260	.00000	.00290	.03420
.601	.000	.00220	-.02090	-.00440	.00080	.00020	.00050	.03570
.601	2.000	.01190	-.00300	-.00940	.00350	.00000	.00020	.03560
.601	4.000	.03030	.01250	-.00700	.00370	.00000	-.00140	.03410
.601	6.000	.05250	.02740	-.00440	.00460	.00020	-.00500	.03450
.601	8.000	.07840	.03910	.00150	.00550	.00040	-.00610	.03190
.601	10.000	.10660	.05020	.00080	.00720	.00020	-.00800	.03020
	GRADIENT	.00897	.00758	-.00060	.00035	-.00002	-.00096	.00021

RUN NO. 2029/ 0 RN/L = 6.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.07740	-.04520	.00010	-.00120	.00010	.01040	.04470
.903	-4.000	-.06720	-.04120	-.00290	.00010	.00000	.00870	.04480
.903	-2.000	-.04020	-.02840	-.00060	-.00210	.00000	.00650	.04390
.903	.000	-.01140	-.01720	-.00450	-.00050	.00000	.00560	.04440
.903	2.000	.01540	-.00620	-.00730	.00160	.00000	.00380	.04380
.903	4.000	.04100	.00310	-.00280	.00230	.00010	.00320	.04210
.903	6.000	.06590	.01500	.00020	.00280	.00000	.00160	.04130
.903	8.000	.09260	.02630	.00210	.00400	.00000	.00140	.03850
.903	10.000	.12100	.03740	.00420	.00570	.00000	.00160	.03520
	GRADIENT	.01339	.00551	-.00047	.00037	.00000	-.00078	-.00024

RUN NO. 2030/ 0 RN/L = 6.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.08120	-.04350	-.00440	.00100	-.00020	.01910	.04240
1.000	-4.000	-.06610	-.03810	-.00290	.00040	-.00010	.02110	.04070
1.000	-2.000	-.03990	-.02660	-.00300	.00090	.00000	.02300	.04100
1.000	.000	-.01520	-.01230	-.00600	.00110	-.00010	.02310	.03900
1.000	2.000	.01260	-.00070	-.00570	.00340	.00010	.02320	.03760
1.000	4.000	.03900	.00840	-.00250	.00340	.00000	.02290	.03510
1.000	6.000	.06990	.01650	.00150	.00240	.00000	.02360	.03160
1.000	8.000	.10070	.02660	.00650	.00330	.00000	.02230	.02750
1.000	10.000	.13480	.03550	.00890	.00420	.00000	.02310	.02500
	GRADIENT	.01324	.00594	-.00004	.00034	.00002	.00037	-.00073

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72130) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2031/ 0 RN/L = 6.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.09000	-.04770	-.00340	.00030	-.00010	.04110	.05390
1.199	-4.000	-.07350	-.04010	-.00240	.00020	.00000	.03880	.05450
1.199	-2.000	-.04450	-.02860	-.00190	-.00130	.00000	.03670	.05580
1.199	.000	-.02150	-.01250	-.00280	-.00040	.00000	.03270	.05720
1.199	2.000	.00420	.00150	-.00370	.00110	.00000	.02720	.05650
1.199	4.000	.02550	.01600	-.00090	.00150	.00000	.02660	.05530
1.199	6.000	.05560	.02990	.00250	.00230	.00000	.02470	.05550
1.199	8.000	.09360	.04050	.00580	.00420	.00000	.02330	.05540
1.199	10.000	.13290	.04970	.00760	.00540	-.00010	.02240	.05470
	GRADIENT	.01277	.00707	.00011	.00016	.00001	-.00171	.00021

RUN NO. 2169/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.09780	-.04350	.00010	.00060	-.00030	.04830	.05000
1.461	-4.000	-.08390	-.03610	.00020	.00050	-.00030	.04700	.04960
1.461	-2.000	-.05480	-.02240	.00010	.00050	-.00020	.04840	.04810
1.461	.000	-.02440	-.00920	-.00390	.00130	.00000	.04920	.04540
1.461	2.000	-.00050	.00710	-.00210	.00250	.00000	.05200	.04250
1.461	4.000	.01890	.02280	-.00060	.00240	-.00050	.05400	.03990
1.461	6.000	.04910	.03710	.00580	.00360	.00000	.05610	.03930
1.461	8.000	.08500	.04900	.00670	.00360	-.00030	.05230	.04180
1.461	10.000	.12340	.06000	.00880	.00510	-.00020	.04860	.04370
	GRADIENT	.01326	.00730	-.00022	.00025	.00000	.00070	-.00116

RUN NO. 2232/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.953	-5.000	-.11880	-.02370	.00420	-.00100	-.00070	.05560	.02900
1.953	-4.000	-.09790	-.01860	.00510	-.00130	-.00030	.05340	.02980
1.953	-2.000	-.06520	-.00750	.00460	-.00200	.00000	.05400	.03040
1.953	.000	-.03400	.00490	.00340	-.00140	-.00030	.05250	.03130
1.953	2.000	-.01080	.01840	.00510	-.00040	-.00030	.04980	.03240
1.953	4.000	.01630	.03270	.00430	.00040	-.00030	.04910	.03360
1.953	6.000	.05050	.04640	.00840	.00010	-.00010	.04630	.03460
1.953	8.000	.08440	.05720	.00820	.00110	-.00030	.04540	.03490
1.953	10.000	.13010	.06020	.00810	.00410	-.00030	.04720	.03370
	GRADIENT	.01481	.00626	-.00002	.00017	.00002	-.00068	.00049

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72130) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2237/ 0 RN/L = 4.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.14800	.00050	-.00340	.00750	.00070	.04930	.00270
4.960	-4.000	-.11960	.00290	.00120	.00380	.00050	.04340	.00300
4.960	-2.000	-.07080	.00660	.00610	.00010	.00020	.03650	.00350
4.960	.000	-.02970	.00960	.00740	-.00010	.00000	.03470	.00380
4.960	2.000	.00460	.01210	.00520	.00240	.00000	.03760	.00400
4.960	4.000	.04200	.01770	.00860	.00290	.00010	.03830	.00430
4.960	6.000	.07230	.02110	.00720	.00310	-.00010	.03930	.00440
4.960	8.000	.10520	.02370	.01200	.00250	.00000	.04110	.00440
4.960	10.000	.14160	.02290	.01260	.00230	.00000	.04310	.00440
	GRADIENT	.02086	.00179	.00108	-.00037	-.00007	-.00107	.00017

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72131) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2063/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.596	-5.000	-.08600	-.03990	-.00350	.00110	-.00010	.01980	.02140
.596	-4.000	-.07200	-.03320	-.00050	.00050	-.00030	.00880	.03040
.596	-2.000	-.05330	-.01940	-.00700	-.00020	-.00060	.00450	.03200
.596	.000	-.04000	-.00750	-.01010	.00060	-.00170	.00360	.03240
.596	2.000	-.01660	.01260	-.00180	.00060	-.00060	.00240	.03380
.596	4.000	.00450	.02230	-.00930	.00330	-.00020	.00460	.02770
.596	6.000	.01990	.03580	-.00940	.00480	-.00070	-.00020	.02860
.596	8.000	.04420	.04950	.00070	.00610	.00010	.00220	.02220
.596	10.000	.06100	.06070	.00990	.00650	.00070	-.00060	.02050
	GRADIENT	.00970	.00709	-.00056	.00020	-.00003	-.00137	.00056

RUN NO. 2064/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.11190	-.02630	-.00670	.00230	-.00040	.00540	.04850
.902	-4.000	-.10030	-.02130	-.00870	.00200	.00010	.00590	.04820
.902	-2.000	-.07600	-.00860	-.00520	.00040	-.00030	.00360	.04880
.902	.000	-.04080	.00120	-.00020	-.00040	.00060	.00450	.04770
.902	2.000	-.02280	.01000	-.00890	.00130	-.00020	.00540	.04440
.902	4.000	.00620	.01800	-.00530	.00220	-.00010	.00280	.04370
.902	6.000	.03410	.03050	-.00830	.00550	-.00030	.00340	.04220
.902	8.000	.05730	.04000	-.00530	.00680	-.00040	.00410	.03990
.902	10.000	.08240	.05230	-.00540	.00770	-.00080	.00360	.03700
	GRADIENT	.01321	.00499	.00017	-.00004	.00002	-.00021	-.00057

RUN NO. 2065/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-5.000	-.10300	-.02870	.00210	-.00050	-.00050	.01990	.04190
.997	-4.000	-.09250	-.02420	-.00070	.00000	-.00050	.01980	.04110
.997	-2.000	-.06680	-.00980	.00030	-.00090	-.00030	.01980	.04370
.997	.000	-.03740	.00310	-.00440	.00070	.00000	.02210	.03990
.997	2.000	-.01140	.01480	-.00270	.00290	.00000	.02330	.03810
.997	4.000	.01200	.02130	.00000	.00300	-.00020	.02570	.03370
.997	6.000	.04270	.02890	.00160	.00270	-.00050	.03550	.02920
.997	8.000	.07950	.03930	.00720	.00280	.00000	.03230	.03260
.997	10.000	.11020	.04940	.01050	.00320	-.00010	.02770	.03260
	GRADIENT	.01306	.00584	-.00030	.00043	.00005	.00066	-.00085

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (RP2131) (20 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2066/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.000	-.11840	-.02930	-.00740	.00170	-.00040	.03990	.05620
1.198	-4.000	-.10560	-.02100	-.00350	.00060	-.00010	.03460	.06000
1.198	-2.000	-.07680	-.00800	-.00230	-.00020	-.00010	.03570	.06000
1.198	.000	-.05210	.00590	-.00720	.00120	-.00050	.03640	.05840
1.198	2.000	-.02910	.01990	-.00370	.00150	-.00020	.03100	.05970
1.198	4.000	-.00790	.03400	-.00480	.00330	.00000	.02860	.05850
1.198	6.000	.02040	.04760	-.00470	.00430	-.00070	.02620	.05840
1.198	8.000	.05860	.05840	-.00280	.00500	-.00090	.02630	.05580
1.198	10.000	.10050	.06710	.00310	.00570	-.00060	.02640	.05250
	GRADIENT	.01238	.00696	.00008	.00020	.00002	-.00100	.00011

RUN NO. 2180/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.12500	-.03150	-.00360	.00130	-.00020	.04600	.05300
1.460	-4.000	-.10660	-.02260	.00010	.00090	.00000	.04470	.05280
1.460	-2.000	-.07460	-.00910	.00180	-.00020	.00000	.04320	.05120
1.460	.000	-.04790	.00630	-.00360	.00130	.00000	.04530	.05140
1.460	2.000	-.02840	.02330	-.00270	.00220	-.00030	.05100	.04500
1.460	4.000	-.00390	.03660	-.00630	.00310	-.00070	.05830	.03800
1.460	6.000	.02500	.05390	.00320	.00280	.00000	.05580	.03940
1.460	8.000	.05750	.06500	.00340	.00450	-.00040	.05410	.04090
1.460	10.000	.09340	.07620	.00460	.00520	-.00060	.04820	.04210
	GRADIENT	.01325	.00759	-.00047	.00023	-.00006	.00132	-.00154

RUN NO. 2229/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.955	-5.000	-.14660	-.00390	.00460	-.00280	-.00020	.05680	.03060
1.955	-4.000	-.12740	.00020	.00650	-.00210	.00040	.05450	.03150
1.955	-2.000	-.09800	.01230	.00260	-.00160	-.00060	.05360	.03180
1.955	.000	-.07260	.02750	.00300	-.00080	-.00020	.04960	.03370
1.955	2.000	-.04180	.03720	.00450	.00010	.00000	.04790	.03450
1.955	4.000	-.01580	.05350	.00210	.00080	-.00030	.04680	.03520
1.955	6.000	.01290	.06880	.00700	.00120	-.00020	.04420	.03720
1.955	8.000	.05000	.07890	.00700	.00180	-.00060	.04150	.03860
1.955	10.000	.09680	.08240	.00470	.00440	-.00070	.04150	.03640
	GRADIENT	.01436	.00638	-.00029	.00039	-.00002	-.00113	.00052

MSFC 545 (IA1) MOD ATP LV-(T3)/(31)/(01) (R72131) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2240/ 0 RN/L = 4.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.18460	-.02180	-.02170	.00420	-.01450	.05990	.00160
4.960	-4.000	-.13930	-.01290	-.01080	.00280	-.00920	.05150	.00210
4.960	-2.000	-.05910	.00150	.00880	-.00050	-.00180	.03890	.00260
4.960	.000	-.00270	.00950	.01620	-.00180	.00100	.03420	.00260
4.960	2.000	.01720	.00740	.00000	.00260	-.00140	.04150	.00200
4.960	4.000	.06090	.01530	.01410	-.00170	.00020	.03670	.00260
4.960	6.000	.09150	.02030	.01750	-.00050	.00100	.04060	.00140
4.960	8.000	.13100	.02150	.01110	-.00020	-.00100	.04000	.00300
4.960	10.000	.17080	.01970	.01760	.00470	.00060	.04320	.00290
	GRADIENT	.02663	.00383	.00322	-.00046	.00147	-.00221	.00007

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72132) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2114/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.06630	-.04810	.00300	-.00430	-.00030	.02050	.02220
.600	-4.000	-.05500	-.03890	.00410	-.00290	.00000	.01660	.02590
.600	-2.000	-.02980	-.02470	.00490	-.00550	.00000	.01390	.02650
.600	.000	-.00880	-.01040	-.00240	-.00110	.00020	.01090	.02740
.600	2.000	-.00700	.01110	-.00010	-.00100	.00000	.00940	.02710
.600	4.000	.01430	.02280	-.00470	.00110	-.00050	.00540	.02760
.600	6.000	.04170	.03670	.00510	.00160	-.00040	.00140	.02790
.600	8.000	.06700	.04810	.00870	.00330	.00000	.00000	.02680
.600	10.000	.09430	.05760	.00790	.00560	-.00010	-.00060	.02380
	GRADIENT	.00867	.00798	-.00092	.00058	-.00002	-.00152	.00045

RUN NO. 2113/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.09440	-.03810	.00260	-.00040	-.00040	.01710	.04140
.902	-4.000	-.08040	-.03310	.00180	-.00060	-.00050	.01610	.04130
.902	-2.000	-.05010	-.02040	.00370	-.00280	.00000	.01550	.04020
.902	.000	-.02540	-.00880	-.00590	-.00070	-.00020	.01480	.03980
.902	2.000	.00220	.00240	-.00360	.00170	-.00010	.01150	.03910
.902	4.000	.02590	.01220	-.00250	.00380	.00000	.01170	.03680
.902	6.000	.05540	.02270	.00150	.00300	-.00030	.00970	.03520
.902	8.000	.07920	.03440	.00360	.00360	-.00060	.00780	.03400
.902	10.000	.10570	.04580	.00630	.00510	-.00050	.00660	.03230
	GRADIENT	.01342	.00568	-.00079	.00048	.00005	-.00064	-.00047

RUN NO. 2111/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.995	-5.000	-.09040	-.03590	.00270	.00000	-.00080	.03000	.03800
.995	-4.000	-.07780	-.02940	.00200	-.00020	-.00070	.02970	.03800
.995	-2.000	-.04920	-.01820	.00010	-.00010	-.00050	.03070	.03580
.995	.000	-.02560	-.00440	-.00360	.00260	-.00040	.03040	.03420
.995	2.000	.00120	.00540	-.00420	.00370	-.00040	.03040	.03160
.995	4.000	.02960	.01570	-.00390	.00470	-.00060	.02960	.02960
.995	6.000	.05990	.02550	.00480	.00310	-.00030	.02570	.02930
.995	8.000	.08640	.03530	.00730	.00400	-.00040	.02940	.02770
.995	10.000	.12400	.04370	.00840	.00460	-.00050	.02840	.02520
	GRADIENT	.01324	.00578	-.00085	.00059	.00003	-.00001	-.00098

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(01) (R72132) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2112/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-5.000	-.09910	-.03880	.00050	.00000	-.00020	.04620	.05240
1.196	-4.000	-.08300	-.03240	.00040	.00000	-.00040	.04670	.05070
1.196	-2.000	-.05590	-.01830	.00040	-.00150	-.00030	.04540	.05110
1.196	.000	-.03260	-.00440	-.00540	.00060	-.00010	.04360	.05180
1.196	2.000	-.01020	.01110	-.00560	.00230	-.00020	.03710	.05290
1.196	4.000	.01420	.02570	-.00160	.00330	-.00020	.03410	.05300
1.196	6.000	.04120	.03990	.00130	.00430	-.00030	.03180	.05320
1.196	8.000	.07700	.05260	.00360	.00560	-.00020	.02900	.05280
1.196	10.000	.11570	.06260	.00610	.00660	-.00020	.02660	.05210
	GRADIENT	.01239	.00719	-.00052	.00041	.00001	-.00143	.00018

RUN NO. 2193/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.10420	-.04080	.00180	.00060	-.00020	.05480	.04660
1.463	-4.000	-.08560	-.03310	.00260	.00000	-.00010	.05360	.04610
1.463	-2.000	-.05500	-.01950	.00110	-.00030	-.00040	.05180	.04700
1.463	.000	-.02950	-.00340	-.00250	.00050	-.00020	.04920	.04810
1.463	2.000	-.00610	.01160	-.00330	.00270	.00000	.04750	.04840
1.463	4.000	.01530	.02850	.00060	.00300	-.00020	.04520	.04880
1.463	6.000	.04190	.04450	.00330	.00390	-.00020	.04490	.04840
1.463	8.000	.07320	.05870	.00550	.00490	-.00030	.04450	.04850
1.463	10.000	.11000	.07050	.00930	.00520	-.00030	.04200	.04840
	GRADIENT	.01318	.00765	-.00042	.00034	.00001	-.00106	.00030

RUN NO. 2234/ 0 RN/L = 6.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.953	-5.000	-.12680	-.01470	.00150	-.00100	-.00040	.05510	.03280
1.953	-4.000	-.10640	-.00980	.00390	-.00100	-.00040	.05240	.03350
1.953	-2.000	-.07330	.00170	.00380	-.00100	-.00020	.05020	.03440
1.953	.000	-.04280	.01490	.00090	.00000	-.00030	.04630	.03500
1.953	2.000	-.01880	.02600	.00240	.00080	-.00050	.04310	.03580
1.953	4.000	.00850	.04350	.00360	.00140	-.00040	.04230	.03620
1.953	6.000	.04160	.05780	.00540	.00110	-.00030	.03980	.03640
1.953	8.000	.07540	.06800	.00670	.00160	-.00040	.03680	.03730
1.953	10.000	.11970	.07170	.00570	.00440	-.00070	.03540	.03820
	GRADIENT	.01484	.00645	.00003	.00029	-.00001	-.00146	.00037

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72132) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2235/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.15000	-.00670	-.01970	.00490	.00150	.04680	.00350
4.960	-4.000	-.12070	-.00260	-.01150	.00420	.00140	.04370	.00360
4.960	-2.000	-.06740	.00480	.00130	.00320	.00090	.03890	.00370
4.960	.000	-.02450	.01040	.00560	.00360	.00050	.03650	.00380
4.960	2.000	.00270	.01260	-.00470	.00660	.00010	.03710	.00410
4.960	4.000	.03890	.02030	-.00260	.00610	.00000	.03780	.00430
4.960	6.000	.08460	.01910	.00640	.00280	-.00020	.03960	.00440
4.960	8.000	.11380	.02510	.01170	.00300	.00170	.03940	.00490
4.960	10.000	.14450	.02210	.00900	.00490	.00170	.04320	.00410
	GRADIENT	.02073	.00284	.00157	.00023	-.00018	-.00100	.00009

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72133) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2107/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.603	-5.000	-.05650	-.04690	.00320	-.00250	-.00130	.01670	.02680
.603	-4.000	-.04270	-.04370	.00450	-.00300	-.00030	.01820	.02570
.603	-2.000	-.02380	-.02750	.00260	-.00530	-.00070	.01440	.02690
.603	.000	-.00520	-.01410	-.00400	-.00070	-.00010	.01380	.02560
.603	2.000	.00140	.00470	-.00950	.00130	-.00110	.01110	.02590
.603	4.000	.02200	.01950	-.00700	.00170	-.00170	.00440	.02910
.603	6.000	.04840	.03230	.00250	.00320	-.00060	.00290	.02730
.603	8.000	.07880	.04440	.00980	.00530	-.00030	-.00060	.02700
.603	10.000	.10370	.05670	.01240	.00610	-.00060	-.00290	.02700
	GRADIENT	.00829	.00759	-.00156	.00062	-.00007	-.00131	.00018

RUN NO. 2108/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.08190	-.04200	-.00030	-.00080	-.00020	.01740	.04220
.901	-4.000	-.06620	-.03960	.00270	-.00090	-.00040	.01700	.04300
.901	-2.000	-.04060	-.02730	-.00260	-.00110	-.00030	.01750	.04060
.901	.000	-.01560	-.01390	-.00460	-.00040	-.00050	.01520	.04050
.901	2.000	.00840	-.00280	-.00590	.00320	-.00010	.01310	.03980
.901	4.000	.03550	.00640	.00210	.00220	-.00020	.01260	.03760
.901	6.000	.06310	.01800	.00410	.00280	-.00050	.01140	.03470
.901	8.000	.09250	.02960	.00480	.00400	-.00020	.00940	.03240
.901	10.000	.11930	.04190	.00910	.00510	-.00020	.00710	.03120
	GRADIENT	.01283	.00565	-.00024	.00044	.00001	-.00059	-.00051

RUN NO. 2110/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.996	-5.000	-.08140	-.04290	.00300	.00010	-.00110	.03090	.03980
.996	-4.000	-.06760	-.03610	.00320	.00020	-.00010	.02930	.04080
.996	-2.000	-.04120	-.02410	-.00230	.00050	-.00040	.02860	.03490
.996	.000	-.01580	-.01030	-.00240	.00260	-.00010	.02460	.03480
.996	2.000	.00790	.00070	-.00570	.00450	-.00060	.02640	.03420
.996	4.000	.03890	.01040	-.00300	.00520	-.00040	.02730	.03090
.996	6.000	.06660	.02110	.00400	.00370	-.00030	.02400	.03030
.996	8.000	.09490	.03150	.01140	.00320	-.00010	.02420	.02650
.996	10.000	.13480	.04000	.01430	.00350	.00000	.02400	.02440
	GRADIENT	.01313	.00600	-.00086	.00063	.00003	-.00045	-.00099

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72133) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2109/ 0 RN/L = 6.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-5.000	-.08890	-.04740	.00070	-.00010	-.00030	.04970	.04870
1.197	-4.000	-.07470	-.03970	.00150	-.00020	-.00030	.04950	.04770
1.197	-2.000	-.04730	-.02380	.00020	-.00090	-.00040	.04660	.04850
1.197	.000	-.02280	-.00950	-.00420	.00020	-.00010	.04070	.05060
1.197	2.000	.00120	.00590	-.00370	.00140	-.00020	.03520	.04990
1.197	4.000	.02340	.02030	-.00050	.00290	-.00040	.03440	.04900
1.197	6.000	.05150	.03400	.00240	.00400	-.00020	.03150	.04940
1.197	8.000	.08260	.04660	.00410	.00530	-.00040	.02880	.04920
1.197	10.000	.12050	.05810	.00770	.00590	-.00050	.02550	.04940
	GRADIENT	.01249	.00753	-.00040	.00033	.00000	-.00194	.00016

RUN NO. 2192/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.467	-5.000	-.09780	-.04670	.00090	.00070	-.00010	.06360	.03970
1.467	-4.000	-.08240	-.03900	.00070	.00060	-.00040	.06260	.03990
1.467	-2.000	-.04700	-.02500	.00200	-.00010	-.00010	.05570	.04370
1.467	.000	-.02300	-.00890	-.00290	.00140	.00000	.05200	.04750
1.467	2.000	.00010	.00610	-.00350	.00250	-.00030	.04840	.04920
1.467	4.000	.02220	.02330	.00170	.00290	-.00020	.04340	.05230
1.467	6.000	.04720	.04000	.00610	.00360	-.00030	.04130	.05340
1.467	8.000	.08190	.05350	.00920	.00400	-.00010	.04230	.05360
1.467	10.000	.11920	.06470	.01160	.00440	-.00030	.04250	.05130
	GRADIENT	.01334	.00772	-.00020	.00029	-.00000	-.00227	.00146

RUN NO. 2231/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.11980	-.02070	.00320	-.00170	-.00050	.05690	.03180
1.954	-4.000	-.09970	-.01620	.00510	-.00170	-.00010	.05530	.03210
1.954	-2.000	-.06610	-.00520	.00400	-.00010	.00000	.05450	.03280
1.954	.000	-.03650	.00910	.00290	-.00040	.00000	.05010	.03410
1.954	2.000	-.01270	.02110	.00260	.00070	-.00020	.04730	.03470
1.954	4.000	.01650	.03690	.00550	.00050	.00000	.04500	.03540
1.954	6.000	.04960	.05070	.00750	.00030	-.00020	.04170	.03620
1.954	8.000	.08330	.06090	.00880	.00100	-.00020	.03870	.03720
1.954	10.000	.12830	.06470	.00740	.00410	-.00020	.03830	.03740
	GRADIENT	.01504	.00640	.00004	.00027	.00003	-.00136	.00042

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72133) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2238/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.14850	-.00280	-.02030	.01060	.00250	.05000	.00330
4.960	-4.000	-.11930	-.00080	-.01230	.00670	.00140	.04490	.00340
4.960	-2.000	-.06830	.00320	-.00150	.00240	-.00010	.03840	.00350
4.960	.000	-.02690	.00770	.00230	.00170	-.00090	.03600	.00380
4.960	2.000	.00280	.01240	-.00400	.00530	-.00060	.03760	.00420
4.960	4.000	.03690	.01880	.00290	.00490	.00020	.03950	.00430
4.960	6.000	.07610	.02160	.00760	.00360	.00000	.04010	.00450
4.960	8.000	.10840	.02310	.01050	.00290	.00030	.04050	.00460
4.960	10.000	.14190	.02210	.00820	.00410	.00040	.04340	.00460
	GRADIENT	.02038	.00235	.00214	-.00046	-.00027	-.00112	.00012

MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1) (R72134) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1326.0000 IN. YMRP = .0000
BREF = 1326.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2070/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.07600	-.03940	.00090	-.00050	.00010	.01500	.02380
.598	-4.000	-.06290	-.03460	.00010	-.00090	-.00040	.01140	.02670
.598	-2.000	-.04170	-.02220	-.00400	-.00150	-.00050	.00860	.02780
.598	.000	-.02750	-.00820	-.00800	.00050	-.00100	.00690	.02780
.598	2.000	-.00910	.00940	-.00270	-.00020	-.00040	.00580	.02890
.598	4.000	.01090	.02280	-.00380	.00120	-.00030	.00480	.02660
.598	6.000	.03320	.03530	-.00270	.00300	-.00060	-.00040	.02740
.598	8.000	.05920	.04780	.00310	.00440	-.00010	-.00080	.02400
.598	10.000	.09000	.05830	.00760	.00540	.00010	-.00280	.02190
	GRADIENT	.00934	.00706	-.00053	.00020	-.00003	-.00104	.00029

RUN NO. 2069/ 0 RN/L = 6.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.000	-.10600	-.02800	-.00120	.00030	-.00030	.01290	.04190
.903	-4.000	-.09300	-.02330	-.00480	.00050	-.00010	.01290	.04110
.903	-2.000	-.06750	-.01090	-.00330	-.00030	-.00040	.01210	.04060
.903	.000	-.03750	-.00030	-.00340	.00000	-.00010	.01230	.03950
.903	2.000	-.01300	.00860	-.00760	.00170	-.00030	.01100	.03720
.903	4.000	.01450	.01800	-.00460	.00280	-.00030	.00870	.03610
.903	6.000	.04270	.02900	-.00280	.00410	-.00030	.00760	.03480
.903	8.000	.06680	.04040	-.00020	.00480	-.00030	.00640	.03330
.903	10.000	.09280	.05220	.00220	.00570	-.00050	.00500	.03190
	GRADIENT	.01343	.00517	-.00037	.00026	-.00001	-.00042	-.00065

RUN NO. 2068/ 0 RN/L = 6.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.09990	-.02800	.00240	-.00040	-.00030	.02510	.03950
1.000	-4.000	-.08950	-.02330	-.00020	.00000	-.00050	.02540	.03910
1.000	-2.000	-.06170	-.01040	.00040	-.00050	-.00030	.02720	.04000
1.000	.000	-.03630	.00270	-.00550	.00160	-.00030	.02900	.03660
1.000	2.000	-.00850	.01330	-.00390	.00340	-.00010	.02920	.03360
1.000	4.000	.01780	.02120	-.00080	.00350	-.00040	.03090	.02870
1.000	6.000	.04790	.02970	.00350	.00270	-.00040	.03330	.02530
1.000	8.000	.07970	.03990	.00690	.00320	-.00020	.03160	.02790
1.000	10.000	.11090	.04980	.00870	.00380	-.00030	.02720	.02760
	GRADIENT	.01321	.00567	-.00048	.00050	.00001	.00065	-.00116

MSFC 545 (1A1) MOD ATP LV-(T3)/(S1)/(O1) (R72134) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2067/ 0 RN/L = 6.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.11240	-.03080	-.00350	.00090	-.00040	.04400	.05230
1.199	-4.000	-.09850	-.02350	-.00260	.00020	-.00030	.04260	.05280
1.199	-2.000	-.07080	-.00980	-.00090	-.00070	-.00010	.04290	.05270
1.199	.000	-.04560	.00400	-.00570	.00070	-.00030	.04260	.05170
1.199	2.000	-.02360	.01860	-.00390	.00170	-.00030	.03600	.05350
1.199	4.000	-.00070	.03300	-.00330	.00330	-.00020	.03270	.05330
1.199	6.000	.02670	.04710	-.00190	.00430	-.00050	.02980	.05350
1.199	8.000	.06240	.05920	-.00050	.00540	-.00060	.02750	.05270
1.199	10.000	.10120	.06890	.00330	.00640	-.00050	.02580	.05110
	GRADIENT	.01240	.00706	-.00013	.00029	.00001	-.00120	.00009

RUN NO. 2181/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.000	-.11620	-.03280	-.00100	.00090	-.00020	.04810	.05130
1.462	-4.000	-.10080	-.02470	.00010	.00060	-.00010	.04690	.05090
1.462	-2.000	-.06900	-.01080	.00100	-.00030	-.00010	.04520	.05030
1.462	.000	-.04330	.00470	-.00330	.00090	-.00020	.04400	.05100
1.462	2.000	-.02170	.02070	-.00270	.00230	-.00020	.04510	.04830
1.462	4.000	.00240	.03610	-.00260	.00270	-.00040	.04720	.04500
1.462	6.000	.02900	.05340	.00230	.00340	-.00010	.04600	.04550
1.462	8.000	.06050	.06670	.00360	.00470	-.00030	.04490	.04560
1.462	10.000	.09620	.07860	.00540	.00550	-.00040	.04090	.04590
	GRADIENT	.01325	.00764	-.00033	.00025	-.00002	-.00015	-.00060

RUN NO. 2230/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.954	-5.000	-.14080	-.00510	.00360	-.00190	-.00010	.05380	.03260
1.954	-4.000	-.12200	-.00070	.00460	-.00160	.00000	.05180	.03310
1.954	-2.000	-.08990	.01120	.00300	-.00140	-.00040	.04960	.03350
1.954	.000	-.06160	.02480	.00260	-.00060	-.00020	.04550	.03460
1.954	2.000	-.03430	.03620	.00350	.00040	-.00010	.04310	.03540
1.954	4.000	-.00780	.05280	.00290	.00100	-.00030	.04160	.03620
1.954	6.000	.02180	.06790	.00610	.00130	-.00020	.03950	.03720
1.954	8.000	.05740	.07830	.00730	.00160	-.00030	.03690	.03830
1.954	10.000	.10340	.08200	.00720	.00380	-.00040	.03610	.03850
	GRADIENT	.01466	.00639	-.00011	.00033	-.00002	-.00140	.00040

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72134) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.240
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2239/ 0 RN/L = 4.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.15260	-.01470	-.01630	.00380	-.00720	.05020	.00260
4.960	-4.000	-.12050	-.00770	-.00850	.00290	-.00460	.04530	.00280
4.960	-2.000	-.06210	.00390	.00470	.00080	-.00090	.03790	.00310
4.960	.000	-.01590	.01120	.01040	.00000	.00050	.03510	.00320
4.960	2.000	.01310	.01240	.00340	.00220	-.00050	.03670	.00310
4.960	4.000	.04810	.01880	.00900	.00080	-.00010	.03730	.00340
4.960	6.000	.08110	.02270	.01340	.00110	.00070	.03970	.00300
4.960	8.000	.11540	.02400	.01180	.00070	-.00040	.03960	.00380
4.960	10.000	.15050	.02250	.01290	.00380	.00000	.04170	.00390
	GRADIENT	.02213	.00356	.00248	-.00026	.00073	-.00128	.00008

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72135) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1337/ 0 RN/L = 5.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.597	-5.620	-.00800	-.02290	.03290	.01590	-.00040	.02660	.02210
.597	-3.610	-.00470	-.01770	.02340	.00920	.00000	.03040	.01630
.597	-1.540	-.01050	-.01330	.01150	.00340	.00000	.02870	.01710
.597	.490	-.00760	-.01520	-.00580	-.00130	-.00070	.03140	.01560
.597	2.520	.00000	-.01760	-.01630	-.00760	.00000	.03080	.01590
.597	4.560	-.00390	-.01850	-.03500	-.01170	-.00010	.02960	.01820
.597	6.590	.00370	-.02150	-.04920	-.01660	-.00030	.02780	.02240
.597	.490	-.00080	-.01590	-.00350	-.00230	.00010	.03070	.01520
	GRADIENT	.00059	-.00029	-.00709	-.00259	-.00001	.00002	.00013

RUN NO. 1336/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-5.700	-.02460	-.01030	.05100	.00690	-.00040	.02450	.04090
.903	-3.670	-.02170	-.00730	.03380	.00480	-.00040	.02470	.03790
.903	-1.560	-.02170	-.00610	.01410	.00240	-.00070	.02740	.03380
.903	.490	-.02140	-.00510	-.00460	.00070	-.00010	.02610	.03460
.903	2.550	-.01910	-.00440	-.02220	-.00310	-.00010	.02230	.04020
.903	4.620	-.02070	-.00560	-.04390	-.00540	-.00030	.02130	.04300
.903	6.680	-.02070	-.00620	-.06440	-.00730	-.00020	.01920	.04900
.903	.490	-.02190	-.00510	-.00550	.00000	-.00060	.02690	.03300
	GRADIENT	.00022	.00025	-.00927	-.00125	.00004	-.00057	.00080

RUN NO. 1334/ 0 RN/L = 6.56 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.001	-5.740	-.02140	-.00970	.05910	.00690	.00000	.03720	.04380
1.001	-3.690	-.02530	-.00610	.03810	.00440	.00000	.03760	.04160
1.001	-1.570	-.02910	-.00290	.01530	.00310	-.00040	.03990	.03630
1.001	.480	-.02800	-.00240	-.00600	.00240	-.00020	.03920	.03560
1.001	2.580	-.02460	-.00270	-.02550	-.00030	-.00020	.03670	.04620
1.001	4.630	-.02510	-.00190	-.04550	-.00430	-.00010	.03350	.04800
1.001	6.700	-.02670	-.00260	-.06820	-.00740	-.00020	.03480	.05300
1.001	.480	-.02690	-.00340	-.00540	.00230	-.00040	.04080	.03310
	GRADIENT	.00023	.00041	-.01001	-.00100	-.00000	-.00055	.00109

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(C1) (RP2135) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 13.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = -.624 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1335/ 0 RN/L = 6.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.203	-5.780	-.03860	-.00470	.05850	.01040	-.00040	.05050	.05450
1.203	-3.700	-.03820	-.00250	.03440	.00700	-.00040	.05270	.04900
1.203	-1.580	-.03870	-.00060	.01630	.00230	.00000	.05310	.04570
1.203	.490	-.03820	.00070	-.00330	-.00190	-.00010	.05380	.04630
1.203	2.580	-.03880	.00120	-.02150	-.00670	-.00010	.04870	.05110
1.203	4.660	-.03740	.00030	-.04030	-.01190	-.00020	.04940	.05290
1.203	6.760	-.04440	.00270	-.06470	-.01490	.00000	.04830	.05800
1.203	.490	-.03820	.00050	-.00330	-.00170	-.00020	.05450	.04540
	GRADIENT	.00007	.00035	-.00897	-.00224	.00001	-.00053	.00063

RUN NO. 1306/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.465	-5.800	-.03780	-.00500	.05830	.01360	-.00040	.06160	.04550
1.465	-3.720	-.03550	-.00070	.03500	.00910	-.00010	.05990	.04360
1.465	-1.580	-.03730	.00230	.01430	.00360	-.00030	.06050	.04090
1.465	.500	-.03600	.00310	-.00480	-.00220	.00000	.05980	.04060
1.465	2.600	-.03700	.00240	-.02450	-.00880	-.00010	.06060	.04070
1.465	4.710	-.03790	.00070	-.04940	-.01270	-.00020	.06190	.04330
1.465	6.820	-.04000	.00000	-.07490	-.01740	-.00030	.06010	.04590
1.465	.480	-.03600	.00310	-.00430	-.00240	-.00020	.05980	.04060
	GRADIENT	-.00021	.00014	-.00987	-.00266	-.00000	.00020	-.00004

RUN NO. 1305/ 0 RN/L = 6.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-5.850	-.05380	.01110	.06940	.01190	-.00030	.05940	.03210
1.962	-3.750	-.04860	.01190	.04100	.01030	.00000	.05790	.03120
1.962	-1.580	-.04550	.01430	.01790	.00430	.00000	.05780	.03100
1.962	.520	-.04760	.01490	-.00520	-.00180	-.00020	.05890	.03040
1.962	2.630	-.04910	.01610	-.02740	-.00620	.00000	.05900	.02990
1.962	4.730	-.05680	.01880	-.05490	-.01120	-.00010	.06120	.02870
1.962	6.890	-.06100	.01860	-.08850	-.01320	-.00020	.05980	.03000
1.962	.460	-.04890	.01530	-.00420	-.00180	-.00020	.05890	.03030
	GRADIENT	-.00094	.00074	-.01120	-.00253	-.00001	.00037	-.00029

MSFC 545 (IA1) MOD ATP LV-(T3)/(S1)/(O1) (R72135) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	13.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	-.624	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1291/ 0 RN/L = 4.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.610	-.02930	.01280	.06060	.01850	-.00130	.04210	.00380
4.960	-3.600	-.02150	.01130	.04110	.01320	.00020	.04000	.00390
4.960	-1.540	-.02380	.00990	.01490	.00700	.00010	.03820	.00410
4.960	.490	-.02300	.01210	-.00650	-.00220	.00010	.03810	.00420
4.960	2.540	-.02190	.01270	-.02790	-.00970	.00040	.03830	.00390
4.960	4.580	-.02090	.01480	-.04780	-.01840	-.00020	.04000	.00400
4.960	6.600	-.03280	.01660	-.08040	-.02130	-.00030	.04210	.00440
4.960	.490	-.02640	.01080	-.00990	-.00190	-.00070	.03720	.00410
	GRADIENT	.00015	.00048	-.01079	-.00391	-.00002	.00000	.00000

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01) (R72136) (22 FEB 73

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1320.0000 IN. YMRP = .0000
BREF = 1320.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2137/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.000	-.09050	-.05200	.05660	-.06340	-.00530	.05460	.05120
.601	-4.000	-.07700	-.04480	.06060	-.06650	-.00430	.05440	.05300
.601	-2.000	-.04290	-.02840	.07250	-.07040	-.00110	.05260	.05170
.601	.000	-.01530	-.01480	.07310	-.06990	.00110	.05160	.05020
.601	2.000	.01310	.00020	.06490	-.06500	.00280	.04690	.05390
.601	4.000	.04360	.01450	.06320	-.06150	.00450	.04450	.05120
.601	6.000	.07610	.02900	.05010	-.05370	.00640	.04080	.05180
.601	8.000	.12260	.04310	.03960	-.04510	.00840	.03850	.04980
.601	10.000	.17300	.05030	.02210	-.03520	.01050	.03500	.04770
	GRADIENT	.01489	.00740	.00062	.00028	.00111	-.00115	.00001

RUN NO. 2138/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-5.000	-.12490	-.04600	.03140	-.06470	-.00600	.06860	.06990
.902	-4.000	-.11250	-.03380	.04500	-.06820	-.00480	.06640	.07080
.902	-2.000	-.07220	-.01760	.06240	-.07230	-.00230	.06510	.06860
.902	.000	-.03680	-.00370	.07220	-.07580	-.00020	.06590	.06750
.902	2.000	.00290	.00280	.07070	-.07470	.00180	.06260	.06680
.902	4.000	.04320	.01510	.06210	-.06740	.00460	.06030	.06360
.902	6.000	.08170	.02720	.04180	-.05780	.00610	.05970	.06050
.902	8.000	.12860	.03750	.02590	-.04650	.00790	.05600	.05780
.902	10.000	.18030	.04530	.01490	-.03700	.01040	.05170	.05580
	GRADIENT	.01886	.00653	.00353	-.00050	.00115	-.00079	-.00070

RUN NO. 2140/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.13130	-.03580	.03660	-.06080	-.00660	.09110	.06490
.999	-4.000	-.11560	-.02820	.04480	-.06680	-.00550	.09190	.06560
.999	-2.000	-.07940	-.01270	.05890	-.07190	-.00340	.09180	.05640
.999	.000	-.04130	.00400	.07620	-.07680	-.00040	.09020	.05870
.999	2.000	.00080	.01190	.06540	-.07160	.00170	.08380	.05860
.999	4.000	.04760	.01940	.05890	-.06540	.00440	.08040	.05560
.999	6.000	.09460	.02910	.04850	-.05720	.00680	.07880	.05690
.999	8.000	.15100	.03320	.03910	-.04610	.00960	.07500	.05420
.999	10.000	.21390	.03470	.03060	-.03660	.01240	.07160	.05400
	GRADIENT	.01979	.00631	.00280	-.00056	.00123	-.00126	-.00099

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(C1) (R72136) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2139/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-5.000	-.12690	-.06660	.02510	-.05420	-.00500	.10920	.07310
1.200	-4.000	-.11100	-.05730	.03280	-.06060	-.00400	.10410	.07710
1.200	-2.000	-.07350	-.03470	.05290	-.07200	-.00220	.09980	.07980
1.200	.000	-.03790	-.00850	.06800	-.07670	-.00020	.09550	.07900
1.200	2.000	-.00120	.01160	.06590	-.07590	.00110	.08800	.07940
1.200	4.000	.03240	.03440	.05990	-.07060	.00290	.08670	.07810
1.200	6.000	.07190	.05370	.04530	-.06160	.00480	.08480	.07830
1.200	8.000	.12330	.06260	.02950	-.05280	.00710	.08370	.07540
1.200	10.000	.18630	.06280	.01260	-.04310	.00990	.08330	.07100
	GRADIENT	.01788	.01137	.00432	-.00195	.00087	-.00252	.00043

RUN NO. 2163/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.474	-5.000	-.13790	-.05100	.00800	-.03910	-.00610	.09790	.06870
1.474	-4.000	-.12040	-.04020	.02090	-.04770	-.00480	.09870	.06750
1.474	-2.000	-.08100	-.02060	.04470	-.06200	-.00250	.10180	.06560
1.474	.000	-.04810	.00180	.05790	-.07080	-.00060	.10230	.06430
1.474	2.000	-.01760	.02390	.05590	-.06940	.00060	.10240	.06220
1.474	4.000	.01840	.04140	.05400	-.06920	.00230	.10370	.06180
1.474	6.000	.06120	.05810	.04420	-.06280	.00410	.10400	.06290
1.474	8.000	.11260	.07460	.02830	-.05430	.00620	.10530	.06300
1.474	10.000	.17290	.08450	.00600	-.04200	.00970	.10380	.06260
	GRADIENT	.01725	.01041	.00519	-.00335	.00092	.00061	-.00079

RUN NO. 2212/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.955	-5.000	-.17510	-.02000	.00570	-.03370	-.00760	.11480	.03670
1.955	-4.000	-.15170	-.01070	.01740	-.04150	-.00640	.11620	.03660
1.955	-2.000	-.11080	.00810	.04130	-.05650	-.00400	.11900	.03780
1.955	.000	-.07520	.02970	.05300	-.06560	-.00250	.11730	.03980
1.955	2.000	-.04160	.05000	.05190	-.06400	-.00150	.11360	.04170
1.955	4.000	.00220	.06560	.04950	-.06310	.00080	.11310	.04240
1.955	6.000	.05030	.08150	.03710	-.05640	.00320	.11020	.04370
1.955	8.000	.11550	.08650	.01730	-.04420	.00710	.10860	.04290
1.955	10.000	.19910	.08210	.00280	-.03350	.01290	.10680	.04170
	GRADIENT	.01922	.00972	.00499	-.00334	.00089	-.00051	.00071

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72136) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2255/ 0 RN/L = 4.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.21220	.02670	-.00430	-.02900	-.00830	.07910	.00280
4.960	-4.000	-.17220	.02550	.00000	-.03040	-.00750	.07670	.00390
4.960	-2.000	-.10360	.02480	.00590	-.03260	-.00560	.07370	.00550
4.960	.000	-.04680	.02630	.00920	-.03380	-.00320	.07220	.00620
4.960	2.000	.00160	.02950	.01050	-.03440	-.00040	.07160	.00620
4.960	4.000	.04990	.03080	.00840	-.02920	.00280	.07110	.00640
4.960	6.000	.09670	.03280	.00840	-.02730	.00590	.07350	.00630
4.960	8.000	.14970	.03040	.00490	-.02340	.00890	.07360	.00660
4.960	10.000	.20690	.02360	-.00290	-.02010	.01190	.07560	.00670
	GRADIENT	.02888	.00055	.00146	-.00019	.00123	-.00085	.00038

MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(01) (R72137) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	14.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2144/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-5.000	-.09080	-.06300	.05730	-.06730	-.00530	.05240	.05630
.600	-4.000	-.07330	-.05150	.06370	-.07060	-.00380	.05150	.05550
.600	-2.000	-.04520	-.03740	.07140	-.07470	-.00170	.04980	.05700
.600	.000	-.00470	-.02430	.07270	-.07420	.00080	.04860	.05550
.600	2.000	.01700	-.01090	.06770	-.07040	.00300	.04630	.05580
.600	4.000	.04810	.00630	.06930	-.06720	.00520	.04230	.05590
.600	6.000	.08910	.02040	.06230	-.05840	.00770	.03920	.05490
.600	8.000	.13110	.03120	.04220	-.04940	.00910	.03640	.05400
.600	10.000	.17750	.04100	.02640	-.03970	.01110	.03370	.05170
	GRADIENT	.01545	.00737	.00105	.00008	.00116	-.00104	-.00004

RUN NO. 2143/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.904	-5.000	-.10760	-.05500	.03780	-.06640	-.00500	.07870	.06110
.904	-4.000	-.09320	-.04800	.04510	-.06990	-.00440	.07870	.06130
.904	-2.000	-.05580	-.03110	.06320	-.07480	-.00170	.07550	.06140
.904	.000	-.02110	-.01800	.07450	-.07800	.00080	.07450	.06050
.904	2.000	.01840	-.01020	.07220	-.07620	.00310	.06850	.06140
.904	4.000	.06050	.00180	.06130	-.06930	.00570	.06520	.06060
.904	6.000	.10200	.01490	.04640	-.06070	.00760	.06270	.05950
.904	8.000	.14570	.02630	.02890	-.04960	.00940	.05910	.05740
.904	10.000	.19640	.03440	.01400	-.03860	.01140	.05500	.05520
	GRADIENT	.01867	.00628	.00310	-.00050	.00121	-.00154	-.00005

RUN NO. 2141/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-5.000	-.11340	-.04930	.03720	-.06260	-.00620	.09280	.05870
.999	-4.000	-.09410	-.04190	.04770	-.06840	-.00470	.09500	.05850
.999	-2.000	-.05800	-.02590	.06480	-.07570	-.00210	.09700	.06020
.999	.000	-.02090	-.01070	.07590	-.07910	.00010	.09310	.05960
.999	2.000	.01710	-.00060	.07020	-.07470	.00280	.08870	.05810
.999	4.000	.06100	.00690	.06060	-.06760	.00530	.08570	.05720
.999	6.000	.11000	.01560	.04890	-.05890	.00770	.07970	.05590
.999	8.000	.16610	.02190	.03720	-.04810	.01030	.07730	.05450
.999	10.000	.22780	.02590	.02930	-.03910	.01300	.07480	.05310
	GRADIENT	.01913	.00643	.00285	-.00063	.00126	-.00095	-.00015

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72137) (22 FEB 73

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2142/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.201	-5.000	-.11240	-.06430	.03220	-.06190	-.00490	.12120	.06170
1.201	-4.000	-.09190	-.05720	.04190	-.06680	-.00360	.12290	.05860
1.201	-2.000	-.05780	-.03840	.05900	-.07500	-.00150	.12100	.05840
1.201	.000	-.02470	-.01520	.07170	-.07950	.00040	.11070	.06510
1.201	2.000	.01040	.00240	.06830	-.07750	.00210	.10180	.06790
1.201	4.000	.04340	.02110	.06040	-.07240	.00390	.09890	.06860
1.201	6.000	.09160	.03690	.04670	-.06250	.00620	.09380	.07010
1.201	8.000	.14190	.04770	.02950	-.05290	.00850	.08990	.07050
1.201	10.000	.20390	.05000	.01450	-.04480	.01140	.08820	.06810
	GRADIENT	.01719	.00970	.00344	-.00130	.00096	-.00290	.00111

RUN NO. 2171/ 0 RN/L = 6.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.461	-5.000	-.11640	-.07290	.01230	-.04510	-.00470	.10870	.06580
1.461	-4.000	-.09660	-.06050	.02540	-.04850	-.00270	.10930	.06560
1.461	-2.000	-.06500	-.03390	.04260	-.05880	-.00170	.10390	.06630
1.461	.000	-.03580	-.00900	.05520	-.06770	-.00010	.09970	.06660
1.461	2.000	-.00330	.01450	.05690	-.06620	.00150	.09960	.06650
1.461	4.000	.03290	.03090	.05840	-.06860	.00330	.10170	.06560
1.461	6.000	.07450	.04650	.04830	-.06410	.00500	.10710	.06360
1.461	8.000	.12680	.06110	.03180	-.05560	.00730	.10690	.06340
1.461	10.000	.18960	.07150	.00870	-.04260	.01070	.10560	.06260
	GRADIENT	.01622	.01180	.00506	-.00272	.00083	-.00104	.00003

RUN NO. 2213/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.951	-5.000	-.15080	-.03750	.00160	-.03470	-.00650	.09670	.04220
1.951	-4.000	-.12400	-.02780	.01950	-.04230	-.00400	.09470	.04380
1.951	-2.000	-.08630	-.00960	.04080	-.05550	-.00190	.10270	.04340
1.951	.000	-.05280	.01010	.04660	-.06250	-.00100	.10530	.04440
1.951	2.000	-.02030	.02940	.04970	-.06220	.00020	.10030	.04520
1.951	4.000	.01800	.04850	.04540	-.06070	.00220	.10250	.04580
1.951	6.000	.06810	.06250	.03400	-.05460	.00460	.10140	.04730
1.951	8.000	.13110	.06970	.01560	-.04250	.00850	.10300	.04420
1.951	10.000	.21110	.06910	.00210	-.03270	.01380	.10570	.04230
	GRADIENT	.01820	.00956	.00465	-.00293	.00086	.00074	.00035

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72137) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	14.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2254/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.14620	-.00680	-.03810	-.02610	-.00970	.08480	.00560
4.960	-4.000	-.13180	.00370	-.01900	-.02940	-.00770	.08060	.00550
4.960	-2.000	-.09110	.01580	.00300	-.03330	-.00440	.07500	.00570
4.960	.000	-.04310	.02110	.01080	-.03480	-.00170	.07260	.00610
4.960	2.000	.00740	.02350	.00950	-.03480	.00060	.07250	.00620
4.960	4.000	.05930	.02540	.00900	-.03080	.00310	.07300	.00640
4.960	6.000	.10070	.02940	.00510	-.02700	.00560	.07420	.00670
4.960	8.000	.15350	.02570	-.00130	-.02270	.00900	.07540	.00570
4.960	10.000	.21230	.01880	-.00600	-.02060	.01230	.07760	.00610
	GRADIENT	.02309	.00337	.00485	-.00059	.00140	-.00127	.00010

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72138) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2145/ 0 RN/L = 4.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-5.000	-.12830	-.04010	.04890	-.06140	-.00650	.05430	.04710
.602	-4.000	-.11010	-.03450	.05150	-.06440	-.00680	.05290	.04750
.602	-2.000	-.07130	-.01820	.07660	-.07160	-.00280	.05030	.04730
.602	.000	-.04130	-.00390	.07210	-.06940	-.00070	.04500	.04760
.602	2.000	-.01530	.01110	.06620	-.06380	.00070	.04710	.04710
.602	4.000	.02220	.02770	.07280	-.06220	.00310	.04030	.04900
.602	6.000	.06230	.03940	.07020	-.05330	.00540	.03800	.04750
.602	8.000	.09700	.05710	.05160	-.04420	.00670	.03350	.04780
.602	10.000	.13780	.06410	.02810	-.03460	.00820	.02960	.04690
	GRADIENT	.01637	.00756	.00236	.00007	.00112	-.00143	.00013

RUN NO. 2146/ 0 RN/L = 6.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-5.000	-.15500	-.02830	.03470	-.05880	-.00700	.05940	.07920
.900	-4.000	-.13970	-.02230	.04510	-.06370	-.00710	.05750	.07900
.900	-2.000	-.10290	-.00680	.06030	-.06900	-.00400	.05970	.07440
.900	.000	-.06110	.00830	.06690	-.07280	-.00200	.05720	.07370
.900	2.000	-.01590	.01870	.06460	-.06870	.00010	.05650	.07030
.900	4.000	.02100	.03010	.05310	-.06110	.00290	.05270	.06810
.900	6.000	.05800	.04170	.04170	-.05460	.00460	.05020	.06630
.900	8.000	.10740	.05130	.02720	-.04560	.00620	.04830	.06590
.900	10.000	.16190	.05760	.01830	-.03700	.00930	.04480	.06510
	GRADIENT	.01995	.00661	.00226	-.00038	.00113	-.00060	-.00127

RUN NO. 2148/ 0 RN/L = 6.52 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.001	-5.000	-.14640	-.02600	.02910	-.05680	-.00760	.08840	.07250
1.001	-4.000	-.13130	-.01560	.03810	-.06050	-.00620	.08860	.06040
1.001	-2.000	-.09130	.00070	.05180	-.06370	-.00400	.08890	.05450
1.001	.000	-.06030	.01530	.06130	-.06870	-.00220	.08750	.06140
1.001	2.000	-.01680	.02460	.05850	-.06500	.00070	.08260	.06140
1.001	4.000	.02960	.03110	.05230	-.06050	.00300	.07840	.05210
1.001	6.000	.07340	.04180	.04420	-.05360	.00560	.07910	.05610
1.001	8.000	.13390	.04460	.03440	-.04570	.00850	.07350	.05660
1.001	10.000	.19720	.04320	.02810	-.03950	.01130	.06940	.05510
	GRADIENT	.01936	.00641	.00275	-.00051	.00116	-.00110	-.00131

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72138) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2147/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.201	-5.000	-.14780	-.06380	.02630	-.05330	-.00610	.10200	.08760
1.201	-4.000	-.13250	-.05160	.03040	-.06000	-.00560	.09580	.09030
1.201	-2.000	-.08920	-.02580	.05530	-.07360	-.00380	.09160	.09160
1.201	.000	-.05540	.00240	.06560	-.07610	-.00160	.09030	.08730
1.201	2.000	-.02080	.02580	.06620	-.07580	-.00030	.08390	.08610
1.201	4.000	.01420	.05060	.06240	-.07100	.00150	.08320	.08320
1.201	6.000	.05460	.07000	.04490	-.06390	.00270	.08160	.08400
1.201	8.000	.10680	.07760	.02950	-.05380	.00500	.08020	.08110
1.201	10.000	.16900	.07850	.01160	-.04200	.00820	.07690	.07950
	GRADIENT	.01813	.01271	.00450	-.00203	.00087	-.00197	-.00064

RUN NO. 2177/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.464	-5.000	-.15780	-.03480	.00660	-.03620	-.00690	.09220	.06590
1.464	-4.000	-.14260	-.02440	.01790	-.04750	-.00620	.09140	.06650
1.464	-2.000	-.10280	-.00890	.04340	-.06200	-.00330	.10040	.06690
1.464	.000	-.06620	.01370	.05610	-.07040	-.00180	.10010	.06360
1.464	2.000	-.03830	.03580	.05510	-.06920	-.00060	.10200	.06020
1.464	4.000	-.00770	.05990	.05360	-.06880	.00040	.10290	.05940
1.464	6.000	.02740	.08140	.04560	-.06510	.00170	.10600	.05750
1.464	8.000	.06940	.09960	.03180	-.05930	.00310	.10500	.05990
1.464	10.000	.12710	.10910	.00850	-.04800	.00640	.09970	.06300
	GRADIENT	.01690	.01044	.00538	-.00351	.00084	.00130	-.00086

RUN NO. 2216/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.949	-5.000	-.19540	-.00400	.00470	-.03230	-.00860	.11690	.03860
1.949	-4.000	-.17190	.00460	.01250	-.04010	-.00800	.11690	.03920
1.949	-2.000	-.13100	.02470	.03760	-.05490	-.00530	.11690	.04040
1.949	.000	-.10140	.04980	.04780	-.06220	-.00440	.11340	.04190
1.949	2.000	-.06660	.06610	.04400	-.05970	-.00320	.10900	.04420
1.949	4.000	-.01830	.08460	.04680	-.05940	-.00070	.10900	.04430
1.949	6.000	.02270	.10430	.03370	-.05430	.00050	.10600	.04510
1.949	8.000	.08320	.10830	.01560	-.04320	.00430	.10030	.04800
1.949	10.000	.16360	.09870	-.00130	-.03100	.01040	.09580	.04960
	GRADIENT	.01890	.01004	.00473	-.00300	.00086	-.00104	.00069

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72138) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	14.000
RUDDER =	.000	AILRON =	.000
ORBINC =	1.500	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2258/ 0 RN/L = 4.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.24300	.00540	-.06870	-.00480	-.01360	.09040	.00280
4.960	-4.000	-.19180	.01510	-.04230	-.01410	-.01130	.08390	.00320
4.960	-2.000	-.11140	.03160	-.00220	-.02780	-.00700	.07480	.00360
4.960	.000	-.05070	.03930	.01570	-.03380	-.00370	.07090	.00410
4.960	2.000	-.00390	.03130	.00270	-.03010	-.00230	.07360	.00550
4.960	4.000	.04500	.03650	.00190	-.02860	.00010	.07170	.00630
4.960	6.000	.10220	.03440	.00790	-.02870	.00420	.07280	.00640
4.960	8.000	.15200	.03440	.01060	-.02520	.00940	.07390	.00640
4.960	10.000	.20180	.02930	.00290	-.02020	.01280	.07540	.00650
	GRADIENT	.03146	.00313	.00744	-.00254	.00150	-.00190	.00039

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72139) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2160/ 0 RN/L = 5.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.593	-5.000	-.09260	-.04880	.04120	-.05950	-.00600	.06450	.03800
.593	-4.000	-.07770	-.04030	.05490	-.06230	-.00380	.06630	.03650
.593	-2.000	-.04170	-.02560	.06230	-.06510	-.00090	.06460	.03630
.593	.000	-.01130	-.01550	.05650	-.06130	.00150	.06070	.03700
.593	2.000	.02400	.00090	.06120	-.05940	.00400	.05730	.03640
.593	4.000	.04990	.01620	.05280	-.05270	.00560	.05350	.03730
.593	6.000	.09280	.03040	.04230	-.04540	.00750	.04970	.03640
.593	8.000	.13490	.04150	.02490	-.03500	.00890	.04270	.03760
.593	10.000	.17900	.05230	.00760	-.02370	.01070	.03790	.03610
	GRADIENT	.01611	.00705	.00094	.00077	.00128	-.00136	-.00003

RUN NO. 2159/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.899	-5.000	-.12960	-.03860	.03260	-.05880	-.00690	.07930	.04650
.899	-4.000	-.11240	-.02860	.03970	-.06180	-.00550	.07880	.04580
.899	-2.000	-.07710	-.01320	.05610	-.06500	-.00270	.07760	.04490
.899	.000	-.03630	-.00200	.06430	-.06780	-.00020	.07570	.04330
.899	2.000	.00600	.00990	.06230	-.06450	.00250	.07120	.04150
.899	4.000	.04440	.02030	.05430	-.05850	.00450	.06920	.03970
.899	6.000	.08420	.03030	.03960	-.05030	.00610	.06710	.03780
.899	8.000	.13090	.04190	.02250	-.03980	.00820	.06420	.03480
.899	10.000	.18300	.04910	.00670	-.02900	.01040	.06090	.03110
	GRADIENT	.01952	.00643	.00272	-.00009	.00128	-.00117	-.00075

RUN NO. 2157/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.000	-.13160	-.03500	.03190	-.05780	-.00700	.09520	.05620
1.000	-4.000	-.11090	-.02850	.04160	-.06310	-.00590	.09580	.05770
1.000	-2.000	-.07250	-.01360	.05820	-.06890	-.00280	.09460	.05930
1.000	.000	-.03590	.00160	.06980	-.07220	-.00020	.09150	.05900
1.000	2.000	.00090	.01110	.06300	-.06780	.00190	.08750	.05850
1.000	4.000	.04390	.01920	.05490	-.06160	.00430	.08670	.05550
1.000	6.000	.09240	.02960	.04430	-.05280	.00680	.08310	.05870
1.000	8.000	.14590	.03500	.03390	-.04310	.00940	.07930	.05560
1.000	10.000	.20390	.03730	.02760	-.03410	.01190	.07440	.05160
	GRADIENT	.01922	.00621	.00279	-.00048	.00127	-.00110	-.00005

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72139) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2158/ 0 RN/L = 6.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-5.000	-.13140	-.03850	.03170	-.05980	-.00620	.12250	.05540
1.200	-4.000	-.11020	-.02960	.04220	-.06490	-.00480	.12160	.05470
1.200	-2.000	-.07880	-.01360	.05440	-.07130	-.00280	.11960	.05420
1.200	.000	-.04440	.00550	.06850	-.07710	-.00080	.11480	.05600
1.200	2.000	-.01060	.02420	.06510	-.07320	.00100	.10910	.05680
1.200	4.000	.02340	.03970	.05640	-.06670	.00300	.10490	.05800
1.200	6.000	.06940	.04870	.04300	-.05760	.00550	.10220	.05640
1.200	8.000	.12510	.05320	.02590	-.04710	.00800	.10110	.05360
1.200	10.000	.19080	.04890	.01830	-.04010	.01120	.10030	.04760
	GRADIENT	.01700	.00880	.00304	-.00092	.00100	-.00203	.00034

RUN NO. 2195/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-5.000	-.13250	-.05500	.02310	-.05170	-.00560	.11690	.06260
1.463	-4.000	-.11160	-.04410	.03490	-.05810	-.00410	.11730	.06120
1.463	-2.000	-.07540	-.02110	.05380	-.06830	-.00220	.11370	.06110
1.463	.000	-.04390	.00140	.06110	-.07240	-.00050	.11060	.06380
1.463	2.000	-.01420	.02320	.05850	-.06950	.00060	.10590	.06380
1.463	4.000	.02170	.04230	.05790	-.06770	.00230	.10460	.06440
1.463	6.000	.06070	.06140	.04610	-.06090	.00380	.10580	.06450
1.463	8.000	.10800	.07990	.03000	-.05220	.00580	.10560	.06490
1.463	10.000	.16550	.09350	.00940	-.04120	.00900	.10360	.06400
	GRADIENT	.01679	.01093	.00373	-.00173	.00084	-.00154	.00032

RUN NO. 2211/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.949	-5.000	-.17510	-.01530	.01000	-.03850	-.00840	.11580	.03900
1.949	-4.000	-.15080	-.00540	.02360	-.04620	-.00690	.11650	.03920
1.949	-2.000	-.11170	.01410	.04410	-.05940	-.00470	.11900	.03950
1.949	.000	-.07480	.03500	.05380	-.06600	-.00290	.11620	.04150
1.949	2.000	-.03940	.05430	.05490	-.06500	-.00160	.11200	.04250
1.949	4.000	.00170	.07040	.04820	-.06200	.00010	.11060	.04330
1.949	6.000	.04880	.08760	.03250	-.05380	.00230	.10920	.04400
1.949	8.000	.11240	.09450	.01610	-.04260	.00650	.10680	.04430
1.949	10.000	.19560	.09070	.00330	-.03140	.01240	.10440	.04430
	GRADIENT	.01926	.00966	.00435	-.00268	.00092	-.00068	.00052

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72139) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2256/ 0 RN/L = 4.80 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.13730	.01590	.00750	-.03240	-.00900	.07270	.00500
4.960	-4.000	-.12070	.01690	.00800	-.03290	-.00780	.07350	.00520
4.960	-2.000	-.08450	.01980	.00930	-.03360	-.00530	.07440	.00550
4.960	.000	-.04220	.02330	.01110	-.03410	-.00270	.07410	.00580
4.960	2.000	.01170	.02700	.01410	-.03480	-.00010	.07180	.00650
4.960	4.000	.06000	.02730	.01160	-.02930	.00300	.07210	.00640
4.960	6.000	.11640	.02410	.00460	-.02850	.00520	.07260	.00680
4.960	8.000	.16290	.02330	.00230	-.02420	.00900	.07330	.00690
4.960	10.000	.21590	.01760	-.00530	-.02070	.01190	.07440	.00700
	GRADIENT	.02204	.00140	.00062	.00016	.00132	-.00014	.00017

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72140) (22 FEB 73

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = -1.200 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2153/ 0 RN/L = 5.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-5.000	-.08360	-.05390	.05570	-.06300	-.00460	.06300	.04360
.598	-4.000	-.06550	-.05040	.05680	-.06420	-.00330	.06430	.04210
.598	-2.000	-.03580	-.03390	.06460	-.06700	-.00020	.06400	.04060
.598	.000	.00170	-.02400	.06450	-.06440	.00240	.05990	.04040
.598	2.000	.02900	-.00750	.06050	-.06020	.00410	.05740	.04070
.598	4.000	.05640	.00800	.05950	-.05720	.00610	.05350	.04090
.598	6.000	.09520	.02220	.04760	-.04890	.00780	.04630	.04370
.598	8.000	.13860	.03610	.03210	-.03770	.00980	.04300	.04130
.598	10.000	.18450	.04620	.01420	-.02660	.01170	.03720	.04070
	GRADIENT	.01584	.00692	.00042	.00071	.00120	-.00114	-.00026

RUN NO. 2154/ 0 RN/L = 6.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-5.000	-.11840	-.05240	.03270	-.06100	-.00570	.07720	.06080
.901	-4.000	-.09810	-.04540	.04360	-.06500	-.00480	.07740	.05970
.901	-2.000	- 06230	-.02740	.05860	-.07030	-.00230	.07550	.05960
.901	.000	-.02500	-.01580	.06740	-.07330	.00000	.07360	.05850
.901	2.000	.01840	-.00610	.06530	-.07010	.00350	.06860	.05710
.901	4.000	.05640	.00630	.05560	-.06370	.00560	.06610	.05550
.901	6.000	.09580	.01870	.03990	-.05480	.00710	.06640	.05190
.901	8.000	.14190	.03060	.02130	-.04260	.00910	.06470	.04730
.901	10.000	.19220	.03930	.00620	-.03070	.01100	.06080	.04330
	GRADIENT	.01941	.00648	.00275	-.00042	.00129	-.00131	-.00054

RUN NO. 2156/ 0 RN/L = 6.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.998	-5.000	-.11790	-.04600	.03090	-.06000	-.00640	.09780	.05880
.998	-4.000	-.09570	-.03770	.04450	-.06530	-.00480	.09650	.06010
.998	-2.000	-.06080	-.02180	.06190	-.07250	-.00190	.09950	.05860
.998	.000	-.02370	-.00700	.07250	-.07420	.00070	.09140	.05690
.998	2.000	.01450	.00270	.06550	-.06970	.00320	.08930	.05620
.998	4.000	.05440	.01050	.05500	-.06320	.00550	.08650	.05540
.998	6.000	.10200	.01990	.04320	-.05340	.00760	.08230	.05370
.998	8.000	.15670	.02620	.03140	-.04260	.01020	.07880	.05070
.998	10.000	.21570	.03080	.02570	-.03350	.01270	.07640	.04840
	GRADIENT	.01890	.00640	.00279	-.00038	.00132	-.00135	-.00048

MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72140) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	14.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2155/ 0 RN/L = 6.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-5.000	-.11880	-.06950	.02820	-.05990	-.00480	.11200	.07480
1.199	-4.000	-.09810	-.05840	.03990	-.06520	-.00330	.11220	.07310
1.199	-2.000	-.05660	-.03870	.05750	-.07450	-.00130	.10940	.07170
1.199	.000	-.02530	-.01460	.06780	-.07800	.00070	.10710	.07110
1.199	2.000	.01030	.00260	.06430	-.07570	.00230	.10070	.07060
1.199	4.000	.04710	.02320	.05910	-.07070	.00440	.09820	.07100
1.199	6.000	.08760	.04130	.04400	-.06050	.00620	.09520	.07100
1.199	8.000	.13410	.05210	.02390	-.04860	.00810	.09280	.06960
1.199	10.000	.19790	.05190	.01180	-.03990	.01130	.09280	.06320
	GRADIENT	.01820	.01031	.00351	-.00129	.00099	-.00165	-.00040

RUN NO. 2189/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.466	-5.000	-.11880	-.07190	.02470	-.05590	-.00390	.12690	.05690
1.466	-4.000	-.09710	-.05920	.03950	-.06210	-.00270	.12590	.05600
1.466	-2.000	-.05760	-.03510	.05840	-.07150	-.00050	.11910	.05690
1.466	.000	-.02490	-.01350	.06210	-.07330	.00110	.11630	.06050
1.466	2.000	.00520	.00690	.05970	-.07100	.00210	.10880	.06300
1.466	4.000	.04220	.02570	.05960	-.07030	.00410	.10750	.06330
1.466	6.000	.08210	.04700	.04690	-.06340	.00560	.10770	.06390
1.466	8.000	.13110	.06360	.03100	-.05280	.00750	.10650	.06540
1.466	10.000	.18860	.07640	.01190	-.04130	.01060	.10550	.06410
	GRADIENT	.01755	.01086	.00350	-.00146	.00086	-.00233	.00089

RUN NO. 2214/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.951	-5.000	-.15580	-.02920	.00520	-.03810	-.00730	.09900	.04460
1.951	-4.000	-.12880	-.02060	.02290	-.04570	-.00510	.09830	.04530
1.951	-2.000	-.09080	-.00240	.04270	-.05780	-.00290	.10340	.04520
1.951	.000	-.05520	.01690	.04930	-.06340	-.00150	.10310	.04570
1.951	2.000	-.02180	.03480	.04970	-.06220	.00000	.09750	.04710
1.951	4.000	.01650	.05530	.04650	-.06030	.00180	.10090	.04640
1.951	6.000	.06340	.07270	.03180	-.05170	.00400	.10050	.04660
1.951	8.000	.12330	.08170	.01460	-.04070	.00760	.10000	.04710
1.951	10.000	.20260	.08050	.00210	-.03080	.01300	.10010	.04720
	GRADIENT	.01866	.00936	.00432	-.00246	.00094	.00009	.00023

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72140) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	14.000
RUDDER =	.000	AILRON =	.000
ORBINC =	-1.200	DELTAZ =	.240
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 2253/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.16450	.01950	.00500	-.03370	-.00970	.08010	.00230
4.960	-4.000	-.13600	.01830	.00690	-.03460	-.00810	.07790	.00340
4.960	-2.000	-.08110	.01630	.00730	-.03530	-.00530	.07530	.00500
4.960	.000	-.03030	.01740	.00770	-.03510	-.00250	.07420	.00590
4.960	2.000	.01570	.02480	.01290	-.03480	.00040	.07370	.00600
4.960	4.000	.06890	.02060	.00420	-.02940	.00270	.07290	.00640
4.960	6.000	.11050	.02120	-.00560	-.02540	.00500	.07490	.00660
4.960	8.000	.15920	.02360	-.00400	-.02170	.00900	.07520	.00710
4.960	10.000	.22000	.01670	-.00940	-.01870	.01240	.07620	.00730
	GRADIENT	.02569	.00043	.00020	.00035	.00139	-.00074	.00044

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72141) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2152/ 0 RN/L = 5.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.604	-5.000	-.11460	-.04120	.04470	-.05770	-.00620	.05690	.04350
.604	-4.000	-.09600	-.03500	.05100	-.06130	-.00550	.05620	.04430
.604	-2.000	-.06260	-.01930	.06560	-.06610	-.00240	.05360	.04470
.604	.000	-.03180	-.00580	.06460	-.06470	.00000	.05040	.04410
.604	2.000	-.00260	.00870	.05970	-.05990	.00150	.04860	.04450
.604	4.000	.03150	.02330	.06120	-.05670	.00360	.04430	.04500
.604	6.000	.06800	.03720	.05330	-.04810	.00560	.04100	.04470
.604	8.000	.10550	.05170	.03570	-.03860	.00710	.03570	.04530
.604	10.000	.15060	.06080	.01710	-.02890	.00900	.03030	.04530
	GRADIENT	.01599	.00719	.00155	.00023	.00111	-.00138	.00011

RUN NO. 2151/ 0 RN/L = 6.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.904	-5.000	-.14870	-.02890	.02890	-.05720	-.00730	.06810	.06630
.904	-4.000	-.13230	-.02100	.04040	-.06150	-.00670	.06680	.06660
.904	-2.000	-.09630	-.00520	.05590	-.06590	-.00380	.06770	.06400
.904	.000	-.05530	.00760	.06470	-.06950	-.00160	.06580	.06270
.904	2.000	-.01130	.01660	.06270	-.06680	.00070	.06330	.06050
.904	4.000	.02690	.02700	.05280	-.06020	.00340	.06080	.05860
.904	6.000	.06460	.03880	.03820	-.05240	.00500	.05800	.05790
.904	8.000	.11250	.04960	.02300	-.04250	.00690	.05460	.05830
.904	10.000	.16550	.05670	.01230	-.03350	.00950	.05020	.05910
	GRADIENT	.01977	.00619	.00285	-.00046	.00120	-.00076	-.00090

RUN NO. 2149/ 0 RN/L = 6.53 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.001	-5.000	-.14550	-.02520	.02920	-.05600	-.00770	.09150	.06450
1.001	-4.000	-.12660	-.01640	.03930	-.06030	-.00630	.09130	.05950
1.001	-2.000	-.08790	-.00110	.05340	-.06470	-.00380	.09100	.05810
1.001	.000	-.05320	.01350	.06350	-.06810	-.00160	.08880	.05880
1.001	2.000	-.01270	.02220	.05860	-.06410	.00090	.08460	.05720
1.001	4.000	.03160	.03010	.05200	-.05870	.00340	.08120	.05360
1.001	6.000	.07810	.03950	.04090	-.05010	.00580	.07940	.05470
1.001	8.000	.13370	.04370	.03030	-.04130	.00830	.07330	.05440
1.001	10.000	.19520	.04470	.02370	-.03410	.01110	.06780	.05460
	GRADIENT	.01943	.00621	.00266	-.00037	.00122	-.00116	-.00090

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72141) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2150/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.202	-5.000	-.14710	-.04770	.02640	-.05500	-.00670	.10830	.07470
1.202	-4.000	-.12790	-.03770	.03420	-.06070	-.00570	.10480	.07600
1.202	-2.000	-.08940	-.01670	.05390	-.07130	-.00360	.10130	.07700
1.202	.000	-.05520	.00710	.06440	-.07480	-.00160	.09810	.07550
1.202	2.000	-.02090	.02790	.06330	-.07270	.00000	.09060	.07600
1.202	4.000	.01350	.05020	.05730	-.06690	.00170	.08750	.07530
1.202	6.000	.05530	.06680	.04150	-.05850	.00330	.08460	.07600
1.202	8.000	.10650	.07620	.02390	-.04780	.00550	.08120	.07550
1.202	10.000	.16660	.08060	.00550	-.03650	.00840	.07550	.07630
	GRADIENT	.01779	.01094	.00376	-.00143	.00094	-.00230	.00001

RUN NO. 2183/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-5.000	-.15450	-.03700	.01380	-.04350	-.00700	.10370	.06560
1.460	-4.000	-.13630	-.02620	.02610	-.05220	-.00590	.10310	.06540
1.460	-2.000	-.09850	-.00710	.04780	-.06430	-.00350	.10560	.06580
1.460	.000	-.06440	.01540	.05700	-.07040	-.00200	.10380	.06510
1.460	2.000	-.03480	.03760	.05620	-.06860	-.00070	.10210	.06360
1.460	4.000	-.00250	.05930	.05310	-.06650	.00050	.10190	.06350
1.460	6.000	.03400	.08020	.04290	-.06110	.00190	.10400	.06280
1.460	8.000	.07910	.09900	.02770	-.05420	.00370	.10350	.06360
1.460	10.000	.13940	.10940	.00620	-.04340	.00720	.10010	.06420
	GRADIENT	.01686	.01071	.00440	-.00251	.00083	-.00022	-.00026

RUN NO. 2215/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.956	-5.000	-.19270	-.00170	.00660	-.03440	-.00940	.11630	.03950
1.956	-4.000	-.16890	.00690	.01600	-.04170	-.00840	.11590	.03990
1.956	-2.000	-.12750	.02630	.03800	-.05490	-.00580	.11480	.04090
1.956	.000	-.09430	.04840	.04690	-.06110	-.00440	.11070	.04250
1.956	2.000	-.05860	.06520	.04570	-.05920	-.00300	.10540	.04430
1.956	4.000	-.01600	.08480	.04390	-.05750	-.00080	.10330	.04470
1.956	6.000	.02780	.10320	.02920	-.05010	.00080	.10210	.04550
1.956	8.000	.08900	.10930	.01170	-.03870	.00460	.09660	.04750
1.956	10.000	.16790	.10280	-.00410	-.02680	.01030	.09120	.04910
	GRADIENT	.01914	.00969	.00425	-.00258	.00093	-.00141	.00063

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72141) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = 1.500 DELTAZ = .240
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 2257/ 0 RN/L = 4.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.000	-.19040	.00770	-.03480	-.01960	-.01210	.08500	.00340
4.960	-4.000	-.15880	.01520	-.02060	-.02380	-.01020	.08090	.00400
4.960	-2.000	-.10250	.02770	.00130	-.03010	-.00660	.07480	.00480
4.960	.000	-.05040	.03410	.01210	-.03290	-.00360	.07170	.00540
4.960	2.000	.00190	.03120	.00850	-.03170	-.00140	.07260	.00600
4.960	4.000	.04900	.03270	.00470	-.02790	.00170	.07160	.00640
4.960	6.000	.10200	.03360	.00590	-.02680	.00500	.07240	.00660
4.960	8.000	.15250	.03080	.00170	-.02200	.00870	.07310	.00660
4.960	10.000	.20370	.02610	-.00330	-.01840	.01220	.07510	.00670
	GRADIENT	.02656	.00267	.00437	-.00099	.00151	-.00142	.00033

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72142) (22 FEB 73)

REFERENCE DATA

$REF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
$CALE =	100.0000 PERCNT		

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	14.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1328/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-5.600	-.03580	-.00410	.14550	-.08200	-.00020	.07130	.04450
.601	-3.600	-.03460	-.00360	.12030	-.07920	.00000	.07020	.04320
.601	-1.530	-.02650	-.00540	.10260	-.07930	.00030	.06730	.04270
.601	.490	-.01880	-.00770	.08220	-.08020	.00080	.06890	.03810
.601	2.550	-.01570	-.01290	.05610	-.07810	.00080	.06640	.03920
.601	4.560	-.00540	-.01540	.03710	-.07720	.00210	.06220	.04200
.601	6.590	-.00040	-.02480	.00520	-.07560	.00180	.06180	.04300
.601	.490	-.02100	-.00960	.07850	-.07830	.00060	.07010	.03750
	GRADIENT	.00339	-.00152	-.01044	.00025	.00023	-.00083	-.00029

RUN NO. 1327/ 0 RN/L = 6.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.898	-5.660	-.04930	.01030	.16180	-.09550	-.00190	.07960	.07040
.898	-3.620	-.04470	.01060	.13330	-.08920	-.00160	.08150	.06450
.898	-1.540	-.04300	.00980	.10360	-.08290	-.00130	.08370	.05850
.898	.520	-.04120	.00610	.07500	-.07750	-.00100	.07780	.06020
.898	2.600	-.03290	.00350	.04970	-.07380	.00030	.07320	.06160
.898	4.640	-.02750	-.00140	.02410	-.07170	.00090	.06740	.06780
.898	6.720	-.01860	-.00900	-.00450	-.07040	.00200	.06080	.07340
.898	.510	-.03720	.00640	.07680	-.07750	-.00050	.07840	.05890
	GRADIENT	.00215	-.00147	-.01318	.00214	.00032	-.00187	.00047

RUN NO. 1325/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.000	-5.670	-.05690	.01720	.16580	-.10010	-.00270	.10520	.07100
1.000	-3.620	-.05050	.01640	.13480	-.09300	-.00200	.10670	.06830
1.000	-1.520	-.04790	.01510	.10080	-.08500	-.00190	.10720	.06350
1.000	.540	-.04170	.01320	.07030	-.07780	-.00100	.10200	.06350
1.000	2.630	-.03460	.00680	.04100	-.07260	-.00020	.09680	.06360
1.000	4.680	-.02730	.00230	.01270	-.06960	.00060	.08790	.07180
1.000	6.760	-.01940	-.00360	-.01950	-.06870	.00140	.08580	.07980
1.000	.530	-.04280	.01270	.06970	-.07670	-.00120	.09570	.06380
	GRADIENT	.00288	-.00176	-.01465	.00285	.00033	-.00231	.00034

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72142) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 14.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
X-SRB = .000 RUDFLR = 10.000
ELEVTR = .000

RUN NO. 1326/ 0 RN/L = 6.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.198	-5.690	-.06380	.01120	.16080	-.09580	-.00350	.12210	.07580
1.198	-3.620	-.05860	.01110	.13040	-.09260	-.00270	.11900	.07420
1.198	-1.510	-.05660	.01150	.10130	-.08990	-.00220	.11800	.07220
1.198	.560	-.05040	.00910	.07380	-.08560	-.00120	.11390	.07300
1.198	2.670	-.04540	.00350	.04470	-.08230	-.00030	.10860	.07410
1.198	4.750	-.04060	-.00150	.01320	-.08010	.00040	.10280	.08020
1.198	6.870	-.03710	-.00730	-.02090	-.07880	.00150	.10180	.08200
1.198	.570	-.05170	.00790	.07340	-.08600	-.00140	.11470	.07240
	GRADIENT	.00227	-.00159	-.01391	.00156	.00039	-.00200	.00066

RUN NO. 1308/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-5.740	-.07290	.01780	.14840	-.08040	-.00330	.12790	.06380
1.462	-3.640	-.06940	.01850	.11500	-.07850	-.00270	.12510	.06150
1.462	-1.500	-.06380	.01600	.08610	-.07800	-.00200	.12240	.05990
1.462	.590	-.06030	.01390	.05880	-.07860	-.00140	.11680	.06080
1.462	2.710	-.05250	.00920	.03100	-.07810	-.00060	.11320	.06290
1.462	4.800	-.04510	.00350	-.00130	-.07710	.00080	.11070	.06300
1.462	6.940	-.04430	-.00330	-.04020	-.07670	.00150	.10810	.06420
1.462	.560	-.05810	.01490	.06140	-.07880	-.00130	.11470	.06050
	GRADIENT	.00284	-.00174	-.01364	.00013	.00040	-.00180	.00028

RUN NO. 1303/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.972	-5.790	-.08580	.03930	.13770	-.06160	-.00390	.11760	.04600
1.972	-3.680	-.07860	.03590	.10090	-.05860	-.00330	.11350	.04540
1.972	-1.510	-.07590	.03290	.06450	-.05760	-.00310	.11180	.04380
1.972	.600	-.06960	.02880	.03570	-.05910	-.00240	.10760	.04380
1.972	2.740	-.06610	.02390	.00600	-.06130	-.00130	.10410	.04380
1.972	4.850	-.06280	.01860	-.02660	-.06250	.00000	.10370	.04280
1.972	7.000	-.06110	.01390	-.06560	-.06350	.00040	.10360	.04270
1.972	.550	-.06850	.02850	.03670	-.05890	-.00240	.10750	.04370
	GRADIENT	.00194	-.00205	-.01471	-.00054	.00039	-.00128	-.00024

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2)/(O1) (R72142) (22 FEB 73

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	14.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
X-SRB =	.000	RUDFLR =	10.000
ELEVTR =	.000		

RUN NO. 1292/ 0 RN/L = 4.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.560	-.03340	.03140	.09600	-.03390	-.00130	.08760	.00570
4.960	-3.560	-.03200	.02660	.06030	-.03090	-.00160	.08330	.00520
4.960	-1.510	-.03070	.02640	.03260	-.03360	-.00130	.07770	.00550
4.960	.520	-.02670	.02520	.00320	-.03870	-.00200	.07440	.00580
4.960	2.590	-.02580	.02050	-.03570	-.03840	-.00170	.07370	.00590
4.960	4.620	-.02430	.02110	-.05700	-.04280	-.00160	.06930	.00580
4.960	6.630	-.02610	.01660	-.08620	-.04270	-.00130	.06930	.00580
4.960	.520	-.02670	.02520	.00310	-.03950	-.00200	.07490	.00590
	GRADIENT	.00099	-.00083	-.01481	-.00140	-.00002	-.00156	.00008

MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2) (R72143) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 16.000
X-SRB = .000

RUN NO. 1344/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.597	-7.860	-.18330	-.03270	.00690	-.03340	-.01240	.06850	.01570
.597	-5.770	-.13240	-.02330	.02900	-.04450	-.00820	.07180	.01610
.597	-3.660	-.07030	-.01570	.05230	-.05490	-.00380	.07070	.01820
.597	-1.610	-.03360	-.00580	.05750	-.05710	-.00060	.07010	.01870
.597	.460	.01240	.00490	.06150	-.05840	.00300	.07080	.01760
.597	2.520	.04950	.01390	.05670	-.05600	.00600	.07030	.01770
.597	4.630	.10510	.02000	.05160	-.04970	.00930	.06940	.01670
.597	6.710	.16800	.02620	.03320	-.03720	.01250	.06730	.01560
.597	8.780	.21470	.03550	.00870	-.02130	.01410	.06350	.01430
.597	10.770	.26790	.04080	-.01790	-.00650	.01610	.06000	.01340
.597	.460	.01450	.00250	.05880	-.05750	.00340	.07160	.01700
	GRADIENT	.02096	.00440	-.00011	.00056	.00158	-.00012	-.00019

RUN NO. 1345/ 0 RN/L = 6.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-8.150	-.22570	-.02360	-.01000	-.03850	-.01460	.08070	.03240
.900	-5.970	-.16800	-.01110	.01650	-.05080	-.01040	.08440	.03120
.900	-3.810	-.11240	-.00150	.04040	-.06080	-.00610	.08560	.03090
.900	-1.710	-.05820	.00390	.05680	-.06660	-.00200	.08630	.03130
.900	.450	.01500	-.00940	.06530	-.06980	.00310	.08550	.03240
.900	2.600	.07400	-.00810	.06180	-.06540	.00740	.08530	.03280
.900	4.770	.13340	-.00140	.04280	-.05670	.01090	.08390	.03210
.900	6.920	.18790	.00640	.02160	-.04350	.01360	.08160	.03100
.900	9.070	.24900	.01630	-.00150	-.02810	.01580	.07600	.03240
.900	11.140	.31050	.02420	-.01930	-.01410	.01830	.07160	.03210
.900	.430	.01630	-.00910	.06620	-.06990	.00330	.08470	.03510
	GRADIENT	.02906	-.00055	.00044	.00044	.00202	-.00021	.00018

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2) (R72143) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 16.000
X-SRB = .000

RUN NO. 1347/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.002	-8.230	-.22210	-.03190	.00250	-.04430	-.01510	.10610	.04490
1.002	-6.050	-.16110	-.02350	.02340	-.05720	-.01060	.11090	.04560
1.002	-3.830	-.09660	-.01390	.05000	-.06900	-.00530	.11340	.04590
1.002	-1.700	-.03950	-.00620	.06260	-.07470	-.00130	.11490	.04630
1.002	.490	.02240	-.00060	.07150	-.07660	.00350	.11380	.04660
1.002	2.670	.08250	.00450	.06770	-.07250	.00770	.11120	.04560
1.002	4.870	.14170	.01180	.05010	-.06110	.01080	.11200	.04430
1.002	7.060	.20710	.01950	.02480	-.04400	.01420	.10520	.04320
1.002	9.240	.27510	.02610	-.00440	-.02750	.01690	.10320	.04410
1.002	11.350	.35010	.03190	-.02580	-.01350	.02050	.09640	.04500
1.002	.480	.02520	-.00110	.07050	-.07550	.00400	.11230	.04590
	GRADIENT	.02750	.00285	.00023	.00083	.00189	-.00030	-.00018

RUN NO. 1346/ 0 RN/L = 6.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-8.370	-.22930	-.04460	-.00900	-.04180	-.01520	.11840	.05180
1.197	-6.130	-.15870	-.03510	.02430	-.05750	-.01000	.11810	.05160
1.197	-3.920	-.09720	-.02550	.04640	-.07010	-.00550	.11760	.05210
1.197	-1.740	-.04060	-.01370	.06090	-.07600	-.00130	.11820	.05130
1.197	.480	.02000	-.00610	.06720	-.07780	.00300	.11540	.05330
1.197	2.690	.08220	.00230	.06490	-.07400	.00710	.11370	.05360
1.197	4.910	.14040	.01370	.04750	-.06140	.01020	.11230	.05320
1.197	7.140	.21020	.02210	.02170	-.04360	.01350	.11060	.05300
1.197	9.360	.28020	.03000	-.00690	-.02560	.01660	.10720	.05200
1.197	11.520	.35970	.03720	-.02910	-.01460	.02030	.10220	.05370
1.197	.490	.02360	-.00540	.06910	-.07680	.00360	.11620	.05190
	GRADIENT	.02707	.00427	.00027	.00088	.00180	-.00068	.00020

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2) (R72143) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 16.000
X-SRB = .000

RUN NO. 1358/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-8.420	-.24580	-.03420	-.02030	-.03380	-.01670	.12060	.04570
1.462	-6.120	-.16440	-.02680	.01580	-.04930	-.01070	.12290	.04330
1.462	-3.920	-.09970	-.01910	.04130	-.06220	-.00580	.12150	.04270
1.462	-1.740	-.04400	-.00800	.05600	-.06840	-.00180	.11950	.04200
1.462	.480	.01650	-.00290	.06180	-.07180	.00230	.11820	.04340
1.462	2.700	.07520	.00310	.06200	-.07010	.00600	.11960	.04380
1.462	4.910	.13250	.01520	.05100	-.05980	.00890	.11960	.04570
1.462	7.140	.19580	.02670	.02080	-.04140	.01190	.11950	.04590
1.462	9.390	.27350	.03450	-.00870	-.02320	.01570	.11630	.04650
1.462	11.600	.36440	.03750	-.02530	-.01550	.02070	.11180	.04970
1.462	.490	.01960	-.00290	.06130	-.07170	.00260	.11740	.04400
	GRADIENT	.02641	.00361	.00114	.00014	.00168	-.00017	.00035

RUN NO. 1359/ 0 RN/L = 6.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.967	-8.500	-.27010	-.02230	-.02990	-.02050	-.01850	.11330	.03610
1.967	-6.190	-.18080	-.02160	-.00120	-.03530	-.01200	.11440	.03470
1.967	-3.960	-.10960	-.01690	.02430	-.04920	-.00680	.11390	.03430
1.967	-1.740	-.04440	-.01430	.04080	-.05700	-.00190	.11010	.03460
1.967	.480	.01620	-.00880	.04860	-.06150	.00230	.10910	.03560
1.967	2.690	.07100	.00060	.04400	-.05800	.00570	.10970	.03540
1.967	4.930	.13380	.01370	.02910	-.04690	.00880	.11020	.03500
1.967	7.180	.20680	.01800	.00030	-.02880	.01210	.10960	.03500
1.967	9.430	.29180	.01520	-.02240	-.01310	.01660	.10480	.03620
1.967	11.660	.39660	.00640	-.02710	-.00970	.02320	.10280	.03700
1.967	.480	.02140	-.00830	.04680	-.06090	.00260	.10820	.03540
	GRADIENT	.02711	.00343	.00057	.00016	.00175	-.00035	.00010

RUN NO. 1286/ 1 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.959	-7.090	-.17190	-.00280	-.02060	-.02410	-.01090	.08110	.00560
4.959	-5.530	-.12340	-.00640	-.00740	-.02920	-.00900	.07850	.00560
4.959	-3.480	-.07830	-.00650	.00270	-.03430	-.00500	.07760	.00510
4.959	-1.450	-.03940	.00070	.00630	-.03500	-.00310	.07500	.00540
4.959	.610	.01870	.00100	.01350	-.03710	.00170	.07550	.00560
4.959	2.670	.07340	.00310	.00910	-.03560	.00340	.07530	.00580
4.959	4.720	.11910	.00610	.00980	-.03180	.00710	.07670	.00600
4.959	6.810	.17100	.00390	.00090	-.02450	.00960	.07700	.00580
4.959	8.850	.22240	-.00440	-.01600	-.01650	.01290	.07910	.00550
4.959	.620	.02850	.00090	.01520	-.03650	.00190	.07420	.00590
	GRADIENT	.02474	.00134	.00083	.00021	.00150	-.00007	.00011

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2) (R72144) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 16.000
X-SRB = .000

RUN NO. 1351/ 0 RN/L = 4.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.597	-7.600	.02060	-.01270	.11450	-.05220	.00620	.07090	.02610
.597	-5.570	.00410	-.00020	.10410	-.05310	.00570	.07250	.02290
.597	-3.550	.01650	-.00460	.08610	-.05440	.00460	.07410	.02030
.597	-1.530	.01760	-.00420	.07180	-.05670	.00330	.07330	.01980
.597	.480	.01680	.00230	.06580	-.06140	.00300	.07090	.01790
.597	2.510	.01350	.00530	.05290	-.06330	.00260	.06880	.01650
.597	4.560	.01460	.00470	.03350	-.06420	.00150	.06620	.01550
.597	6.590	.00900	.00240	.01500	-.06310	.00130	.06670	.01300
.597	8.590	.01260	.00150	.00570	-.06770	.00170	.06550	.01360
.597	10.530	.00900	.00130	-.00940	-.07140	.00160	.06150	.01530
.597	.490	.01890	.00100	.06240	-.06050	.00300	.07040	.01820
	GRADIENT	-.00039	.00139	-.00613	-.00129	-.00034	-.00100	-.00064

RUN NO. 1350/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-7.680	.02790	-.01280	.15770	-.08500	.00750	.08670	.04680
.903	-5.600	.02670	-.01390	.13110	-.08040	.00620	.08810	.04230
.903	-3.560	.02960	-.01440	.11180	-.07810	.00520	.08750	.04090
.903	-1.530	.02650	-.01290	.08990	-.07400	.00450	.08690	.03560
.903	.510	.02830	-.01250	.07040	-.07130	.00360	.08740	.03150
.903	2.560	.02490	-.01150	.04950	-.06780	.00320	.08220	.03270
.903	4.630	.02250	-.01030	.02870	-.06560	.00270	.08060	.03260
.903	6.680	.01890	-.00620	.01330	-.06810	.00290	.07580	.03750
.903	8.720	.01060	-.00540	-.00110	-.07330	.00290	.07350	.04180
.903	10.680	.00250	-.00480	-.01560	-.07940	.00270	.06910	.04360
.903	.520	.02720	-.01240	.06630	-.06990	.00330	.08630	.03040
	GRADIENT	-.00077	.00047	-.01009	.00152	-.00031	-.00090	-.00095

MSFC 545 (1A1) MOD ATP LV-(T3)(S1/2)/(S1/2) (R72144) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 16.000
X-SRB = .000

RUN NO. 1348/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-7.710	.01890	-.00910	.16630	-.09030	.00790	.11490	.05680
.997	-5.620	.02270	-.00800	.14040	-.08730	.00630	.11350	.05420
.997	-3.550	.02290	-.00540	.11580	-.08460	.00500	.11360	.05170
.997	-1.520	.01960	-.00160	.09450	-.08110	.00420	.11480	.04880
.997	.530	.01760	.00000	.06970	-.07660	.00340	.11360	.04670
.997	2.590	.01580	.00290	.04750	-.07270	.00250	.10750	.04650
.997	4.670	.01210	.00400	.02510	-.07100	.00190	.10690	.04800
.997	6.740	.00850	.00500	.00430	-.07160	.00170	.10160	.05300
.997	8.810	.00020	.00440	-.01960	-.07630	.00160	.10320	.05680
.997	10.780	-.00360	.00450	-.03370	-.08320	.00180	.09560	.05890
.997	.530	.02020	-.00100	.07050	-.07750	.00330	.11520	.04470
	GRADIENT	-.00124	.00113	-.01111	.00173	-.00038	-.00101	-.00047

RUN NO. 1349/ 0 RN/L = 6.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-7.750	.01320	-.00800	.15890	-.07980	.00690	.12560	.05570
1.197	-5.640	.01280	-.00780	.13460	-.08080	.00570	.12330	.05460
1.197	-3.570	.01560	-.00780	.11030	-.08100	.00440	.12040	.05320
1.197	-1.500	.01550	-.00570	.08980	-.08080	.00360	.12010	.05080
1.197	.560	.01430	-.00430	.06800	-.08030	.00300	.11700	.05040
1.197	2.640	.00880	-.00410	.04420	-.07910	.00250	.11080	.05120
1.197	4.730	.00760	-.00400	.02510	-.08030	.00260	.10780	.05250
1.197	6.820	.00140	-.00610	.00200	-.08390	.00270	.10550	.05600
1.197	8.910	-.00680	-.00480	-.02420	-.08650	.00310	.10660	.05660
1.197	10.900	-.01430	-.00420	-.04310	-.09430	.00360	.10590	.06020
1.197	.560	.01220	-.00410	.06730	-.08020	.00300	.11670	.05090
	GRADIENT	-.00110	.00044	-.01041	.00015	-.00023	-.00166	-.00005

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2)/(S1/2) (R72144) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 16.000
X-SRB = .000

RUN NO. 1357/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-7.800	.02740	-.02200	.15860	-.06840	.00770	.13520	.04480
1.460	-5.670	.02270	-.01710	.12670	-.06700	.00600	.13020	.04190
1.460	-3.580	.02430	-.01400	.10330	-.06870	.00520	.12540	.04090
1.460	-1.530	.02160	-.01310	.08150	-.07160	.00420	.12290	.04070
1.460	.570	.02010	-.01200	.05770	-.07300	.00350	.11840	.04020
1.460	2.660	.01950	-.01300	.03440	-.07480	.00290	.11580	.04030
1.460	4.780	.01770	-.01590	.01160	-.07800	.00330	.11640	.04000
1.460	6.890	.01340	-.01700	-.01320	-.08400	.00340	.11530	.04190
1.460	8.990	.00690	-.01680	-.03870	-.09040	.00370	.11330	.04350
1.460	11.040	-.00270	-.01300	-.06390	-.09900	.00360	.11310	.04390
1.460	.580	.01990	-.01320	.05710	-.07380	.00340	.12020	.03960
	GRADIENT	-.00073	-.00018	-.01102	-.00104	-.00024	-.00120	-.00011

RUN NO. 1360/ 0 RN/L = 6.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.970	-7.880	.02140	-.00740	.16290	-.05630	.00710	.12500	.03970
1.970	-5.740	.02680	-.00810	.12960	-.05440	.00620	.11930	.03870
1.970	-3.710	.02800	-.00590	.09920	-.05540	.00500	.11560	.03820
1.970	-1.530	.02510	-.00520	.06990	-.05740	.00380	.11290	.03680
1.970	.590	.02420	-.00510	.04360	-.06070	.00310	.10930	.03580
1.970	2.700	.02010	-.00240	.01870	-.06470	.00230	.10610	.03610
1.970	4.860	.00960	.00200	-.00750	-.07200	.00140	.10670	.03600
1.970	6.980	.00520	.00450	-.03040	-.08010	.00130	.10520	.03740
1.970	9.080	-.00020	.00610	-.06040	-.08650	.00120	.10460	.03710
1.970	11.140	-.00860	.01010	-.08980	-.09280	.00060	.10270	.03890
1.970	.580	.02230	-.00470	.04220	-.06010	.00280	.10800	.03560
	GRADIENT	-.00196	.00087	-.01238	-.00189	-.00041	-.00115	-.00024

RUN NO. 1287/ 0 RN/L = 5.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.580	.00450	.00390	.08680	-.03090	.00270	.08710	.00560
4.960	-3.590	.01270	.00470	.06730	-.03320	.00270	.08000	.00540
4.960	-1.510	.01390	.00230	.03460	-.03420	.00150	.07570	.00550
4.960	.520	.00830	.00580	.00520	-.03970	.00170	.07070	.00550
4.960	2.580	.00600	.00590	-.02260	-.04540	.00070	.07190	.00550
4.960	4.610	.00750	.00270	-.04710	-.04730	.00040	.07090	.00540
4.960	6.620	.00580	.00200	-.07150	-.04870	.00000	.07000	.00540
4.960	.520	.01470	.00290	.00680	-.04070	.00120	.07070	.00570
	GRADIENT	-.00089	-.00002	-.01396	-.00192	-.00026	-.00107	.00000

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2) (R72145) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 17.000
X-SRB = .000

RUN NO. 1352/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-7.630	-.01000	-.00260	.02680	.03660	-.00030	.03430	-.00680
.598	-5.580	-.00460	-.00480	.01960	.02850	.00040	.03470	-.00600
.598	-3.550	-.00140	.00190	.01230	.01930	-.00020	.03270	-.00510
.598	-1.540	-.00760	.00400	.00260	.00970	-.00100	.03400	-.00570
.598	.480	.00420	.00280	.00110	-.00320	.00030	.03460	-.00580
.598	2.510	.00970	.00280	-.00600	-.01110	.00000	.02910	-.00140
.598	4.560	.01240	-.00020	-.01220	-.02200	-.00010	.03050	-.00200
.598	6.590	.01310	.00170	-.02190	-.03110	-.00050	.02810	.00000
.598	8.610	.00940	.00430	-.03940	-.03520	-.00060	.02860	-.00130
.598	10.530	.00630	.00780	-.04620	-.03840	.00000	.02610	-.00020
.598	.480	.00880	.00190	-.00330	-.00040	.00000	.03430	-.00560
	GRADIENT	.00222	-.00027	-.00284	-.00510	.00006	-.00046	.00052

RUN NO. 1353/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.898	-7.730	-.00710	-.00210	.06340	.01040	-.00040	.03310	.01550
.898	-5.650	-.00450	-.00080	.04760	.00600	-.00040	.03280	.01390
.898	-3.590	.00600	-.00150	.03370	.00080	-.00020	.03260	.01330
.898	-1.560	.00720	.00080	.02060	-.00450	-.00010	.03220	.01220
.898	.490	.01120	-.00080	.00570	-.00920	-.00060	.03440	.00890
.898	2.540	.01550	.00040	-.00840	-.01140	-.00030	.03420	.00880
.898	4.610	.01410	-.00010	-.02610	-.01370	-.00060	.03500	.00950
.898	6.670	.01290	.00340	-.04000	-.01860	-.00020	.03220	.01290
.898	8.710	.00830	.00470	-.05550	-.02540	-.00020	.03210	.01790
.898	10.670	.00690	.00580	-.06730	-.03290	-.00060	.02890	.01990
.898	.490	.01130	-.00040	.00710	-.00960	-.00030	.03430	.00790
	GRADIENT	.00119	.00012	-.00725	-.00175	-.00005	.00033	-.00054

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2) (R72145) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 17.000
X-SRB = .000

RUN NO. 1355/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.991	-7.760	-.01670	-.00160	.06560	.01170	-.00050	.04350	.03860
.991	-5.670	-.00620	-.00170	.04920	.00600	-.00030	.04340	.03380
.991	-3.610	.00330	.00000	.03600	.00060	-.00040	.04560	.03470
.991	-1.560	.00430	.00150	.01960	-.00390	-.00040	.04760	.03270
.991	.500	.00640	.00190	.00280	-.00890	-.00050	.04790	.03100
.991	2.560	.00860	.00370	-.01190	-.01270	.00000	.04850	.03170
.991	4.650	.00830	.00430	-.03020	-.01790	-.00050	.04860	.03110
.991	6.730	.00510	.00620	-.04760	-.02500	-.00050	.04990	.03790
.991	8.800	.00060	.00890	-.06470	-.03330	-.00030	.04700	.04440
.991	10.770	-.00230	.01000	-.08180	-.04050	-.00040	.04220	.04640
.991	.490	.00770	.00270	.00530	-.00990	.00000	.05240	.02750
	GRADIENT	.00069	.00052	-.00794	-.00222	.00001	.00033	-.00040

RUN NO. 1354/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.191	-7.810	-.01470	-.00340	.06020	.01990	-.00040	.05710	.03470
1.191	-5.690	-.01120	-.00120	.04260	.01260	-.00050	.05690	.03350
1.191	-3.610	-.00100	-.00140	.02810	.00510	-.00030	.05800	.03090
1.191	-1.560	.00380	.00160	.01640	-.00240	.00000	.05950	.02980
1.191	.520	.00520	.00190	-.00020	-.01000	-.00050	.06080	.02890
1.191	2.610	.00670	.00360	-.01360	-.01770	-.00010	.05900	.03060
1.191	4.710	.00470	.00390	-.03050	-.02620	-.00050	.05920	.03350
1.191	6.800	.00060	.00680	-.04720	-.03440	-.00030	.05860	.03810
1.191	8.880	-.00370	.00870	-.06610	-.04380	-.00040	.05710	.04320
1.191	10.880	-.01020	.01200	-.08490	-.05240	-.00030	.05710	.04450
1.191	.520	.00510	.00220	.00020	-.01110	-.00030	.05960	.02970
	GRADIENT	.00068	.00060	-.00707	-.00374	-.00002	.00009	.00029

MSFC 545 (IA1) MOD ATP LV-(T3)(S1/2) (R72145) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 17.000
X-SRB = .000

RUN NO. 1356/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-7.840	.00000	-.01130	.06250	.02330	-.00030	.06480	.02950
1.462	-5.720	.00530	-.00810	.04230	.01630	.00000	.06310	.02780
1.462	-3.610	.00520	-.00620	.02300	.00790	-.00030	.06330	.02570
1.462	-1.550	.00860	-.00560	.00960	-.00040	-.00010	.06390	.02440
1.462	.540	.00970	-.00370	-.00700	-.00930	.00000	.06370	.02360
1.462	2.630	.01200	-.00430	-.02360	-.01700	-.00040	.06410	.02380
1.462	4.740	.01420	-.00410	-.03820	-.02610	-.00020	.06540	.02480
1.462	6.850	.00980	-.00220	-.05800	-.03560	-.00020	.06490	.02860
1.462	8.940	.00960	-.00060	-.07630	-.04580	-.00030	.06340	.03250
1.462	10.970	.00800	.00000	-.10040	-.05580	-.00030	.06310	.03410
1.462	.550	.01160	-.00540	-.00760	-.01020	-.00010	.06450	.02340
	GRADIENT	.00102	.00026	-.00745	-.00405	-.00000	.00021	-.00011

RUN NO. 1361/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.965	-7.910	-.00470	-.00030	.07830	.02190	-.00020	.05940	.02680
1.965	-5.760	.00490	-.00200	.05070	.01650	-.00030	.05860	.02560
1.965	-3.650	.00980	-.00080	.02980	.00920	-.00020	.05840	.02480
1.965	-1.550	.00960	-.00060	.00730	.00210	-.00040	.05940	.02400
1.965	.570	.01140	.00020	-.01120	-.00730	-.00010	.06020	.02290
1.965	2.680	.01020	.00240	-.02920	-.01660	-.00020	.06050	.02310
1.965	4.810	.00890	.00510	-.04660	-.02680	-.00020	.05990	.02460
1.965	6.940	.00640	.00590	-.06880	-.03700	-.00020	.05990	.02710
1.965	9.030	.00580	.00830	-.09180	-.04710	.00000	.05980	.02860
1.965	11.090	.00500	.00950	-.12470	-.05470	-.00020	.05930	.03010
1.965	.560	.01230	-.00050	-.01140	-.00910	.00000	.05960	.02320
	GRADIENT	-.00006	.00070	-.00895	-.00429	.00001	.00019	-.00006

RUN NO. 1288/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-5.600	.00480	.00500	.06050	.00980	-.00020	.04030	.00540
4.960	-3.610	.00600	.00410	.04230	.00200	.00000	.03830	.00390
4.960	-1.530	.01000	.00130	.01610	-.00450	-.00060	.03560	.00370
4.960	.500	.00750	.00450	-.00690	-.01400	-.00050	.03500	.00380
4.960	2.560	.00520	.00240	-.03470	-.01970	.00040	.03870	.00380
4.960	4.600	.01260	.00400	-.05930	-.02640	.00000	.03820	.00400
4.960	6.620	.01370	.00070	-.08550	-.03040	-.00040	.04140	.00400
4.960	.510	.00720	.00220	-.01020	-.01450	-.00050	.03620	.00390
	GRADIENT	.00041	.00004	-.01238	-.00551	.00005	.00014	.00001

MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (R72201) (22 FEB 73

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 19.000

RUN NO. 3601/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-9.620	-.05490	.02850	.05190	-.05860	-.00750	.03790	.01370
.598	-7.680	-.04510	.02430	.05260	-.05940	-.00580	.03800	.01380
.598	-5.670	-.03540	.02060	.05190	-.05880	-.00410	.03870	.01340
.598	-3.660	-.02560	.01620	.05170	-.05880	-.00260	.03820	.01320
.598	-1.660	-.01490	.01080	.05080	-.05770	-.00070	.03770	.01290
.598	.330	-.00460	.00440	.04800	-.05530	.00090	.03650	.01290
.598	2.310	.00820	-.00420	.04760	-.05480	.00310	.03610	.01370
.598	4.340	.01960	-.00970	.04700	-.05430	.00510	.03630	.01440
.598	6.340	.02800	-.01360	.04590	-.05350	.00640	.03600	.01480
.598	8.360	.03770	-.01740	.04330	-.05110	.00800	.03610	.01500
.598	10.270	.04800	-.02140	.04130	-.04930	.00970	.03570	.01520
.598	.330	-.00570	.00430	.04990	-.05680	.00070	.03720	.01300
	GRADIENT	.00568	-.00334	-.00063	.00060	.00096	-.00027	.00016

RUN NO. 3602/ 0 RN/L = 6.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-9.640	-.05640	.03020	.04880	-.05760	-.00790	.04760	.01550
.900	-7.700	-.04480	.02540	.04870	-.05780	-.00590	.04800	.01500
.900	-5.700	-.03460	.02120	.04830	-.05770	-.00420	.04870	.01450
.900	-3.660	-.02430	.01650	.04830	-.05740	-.00240	.04780	.01440
.900	-1.650	-.01380	.01070	.04750	-.05660	-.00060	.04690	.01430
.900	.340	-.00260	.00390	.04690	-.05580	.00130	.04590	.01470
.900	2.310	.00900	-.00360	.04620	-.05520	.00340	.04580	.01530
.900	4.360	.01950	-.00870	.04640	-.05540	.00530	.04650	.01520
.900	6.370	.02850	-.01330	.04480	-.05450	.00680	.04750	.01550
.900	8.380	.04050	-.01820	.04430	-.05390	.00880	.04600	.01610
.900	10.320	.05260	-.02350	.04230	-.05280	.01090	.04550	.01630
.900	.310	-.00230	.00330	.04640	-.05530	.00140	.04610	.01470
	GRADIENT	.00552	-.00323	-.00025	.00027	.00097	-.00018	.00013

MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (R72201) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 19.000

RUN NO. 3603/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-9.650	-.05430	.02890	.04400	-.05540	-.00780	.05780	.01620
.997	-7.710	-.04400	.02490	.04360	-.05530	-.00610	.05820	.01610
.997	-5.700	-.03280	.02020	.04310	-.05490	-.00420	.05820	.01570
.997	-3.660	-.02360	.01630	.04310	-.05470	-.00260	.05740	.01550
.997	-1.650	-.01250	.01050	.04270	-.05410	-.00060	.05640	.01540
.997	.340	.00000	.00320	.04190	-.05340	.00160	.05520	.01540
.997	2.320	.01000	-.00300	.04150	-.05290	.00340	.05580	.01580
.997	4.390	.02050	-.00840	.04120	-.05270	.00530	.05490	.01570
.997	6.400	.03200	-.01290	.04040	-.05230	.00730	.05620	.01570
.997	8.400	.04130	-.01690	.04030	-.05200	.00890	.05490	.01560
.997	10.330	.05350	-.02150	.03960	-.05150	.01100	.05450	.01570
.997	.310	-.00120	.00310	.04230	-.05370	.00140	.05620	.01530
	GRADIENT	.00551	-.00313	-.00025	.00026	.00099	-.00028	.00004

RUN NO. 3604/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.201	-9.710	-.05290	.02430	.03660	-.04930	-.00790	.06210	.01220
1.201	-7.740	-.04200	.02130	.03620	-.04860	-.00600	.06180	.01210
1.201	-5.730	-.03120	.01750	.03700	-.04940	-.00410	.06170	.01170
1.201	-3.680	-.02250	.01430	.03730	-.05020	-.00260	.06110	.01140
1.201	-1.640	-.01180	.00940	.03710	-.04960	-.00060	.06000	.01140
1.201	.330	-.00120	.00310	.03670	-.04890	.00110	.05920	.01130
1.201	2.330	.00950	-.00240	.03660	-.04870	.00320	.05960	.01120
1.201	4.370	.01910	-.00610	.03700	-.04900	.00490	.06020	.01150
1.201	6.430	.02910	-.00940	.03630	-.04890	.00660	.06120	.01170
1.201	8.440	.03990	-.01290	.03580	-.04890	.00850	.06170	.01210
1.201	10.410	.05150	-.01640	.03560	-.04900	.01050	.06160	.01250
1.201	.310	-.00140	.00300	.03630	-.04860	.00110	.05930	.01120
	GRADIENT	.00521	-.00262	-.00005	.00016	.00094	-.00011	.00000

MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (R72201) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 19.000

RUN NO. 3610/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.465	-9.730	-.05590	.02470	.03890	-.05270	-.00830	.05740	.01150
1.465	-7.750	-.04370	.02160	.03880	-.05250	-.00620	.05690	.01140
1.465	-5.730	-.03160	.01770	.03910	-.05230	-.00400	.05580	.01100
1.465	-3.700	-.02340	.01500	.03860	-.05160	-.00260	.05470	.01090
1.465	-1.660	-.01230	.00960	.03880	-.05160	-.00060	.05310	.01090
1.465	.340	-.00140	.00360	.03820	-.05080	.00120	.05240	.01080
1.465	2.330	.01010	-.00250	.03830	-.05090	.00330	.05280	.01100
1.465	4.420	.02160	-.00730	.03790	-.05090	.00540	.05430	.01140
1.465	6.430	.03090	-.01020	.03750	-.05080	.00700	.05540	.01180
1.465	8.460	.04290	-.01400	.03690	-.05030	.00910	.05580	.01200
1.465	10.410	.05450	-.01710	.03540	-.04930	.01110	.05580	.01230
1.465	.320	-.00010	.00290	.03860	-.05100	.00150	.05220	.01080
	GRADIENT	.00556	-.00280	-.00009	.00010	.00098	-.00005	.00005

RUN NO. 3611/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.950	-9.790	-.05680	.02070	.03030	-.04210	-.00890	.04720	.00790
1.950	-7.810	-.04320	.01700	.02870	-.04000	-.00660	.04810	.00790
1.950	-5.770	-.03080	.01370	.02820	-.03950	-.00440	.04800	.00790
1.950	-3.710	-.02190	.01110	.03150	-.04300	-.00260	.04780	.00770
1.950	-1.680	-.01160	.00720	.03250	-.04380	-.00070	.04690	.00730
1.950	.340	-.00040	.00250	.03130	-.04190	.00120	.04550	.00720
1.950	2.360	.01070	-.00250	.03040	-.04100	.00320	.04520	.00690
1.950	4.420	.02110	-.00600	.03000	-.04110	.00500	.04620	.00710
1.950	6.470	.03120	-.00880	.02790	-.03870	.00670	.04670	.00750
1.950	8.510	.04460	-.01250	.02850	-.03960	.00920	.04680	.00770
1.950	10.500	.05840	-.01580	.02730	-.03830	.01160	.04670	.00790
1.950	.320	.00030	.00180	.03010	-.04050	.00130	.04420	.00710
	GRADIENT	.00533	-.00216	-.00025	.00032	.00094	-.00024	-.00008

MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (R72201) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 19.000

RUN NO. 3614/ 0 RN/L = 4.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.959	-9.660	-.06580	.02560	.01710	-.02220	-.01120	.02810	.00130
4.959	-7.710	-.05260	.01910	.01570	-.02180	-.00900	.02600	.00130
4.959	-5.720	-.03640	.01300	.01740	-.02290	-.00590	.02540	.00130
4.959	-3.680	-.02150	.00810	.01930	-.02500	-.00300	.02540	.00130
4.959	-1.670	-.01260	.00520	.02120	-.02750	-.00130	.02610	.00130
4.959	.340	.00030	.00070	.02120	-.02730	.00090	.02540	.00130
4.959	2.320	.00910	-.00230	.02090	-.02730	.00260	.02660	.00120
4.959	4.370	.01910	-.00590	.01800	-.02420	.00430	.02560	.00120
4.959	6.390	.03300	-.01100	.01570	-.02190	.00670	.02490	.00120
4.959	8.390	.05050	-.01720	.01540	-.02100	.01010	.02520	.00140
4.959	10.320	.06860	-.02480	.01480	-.02100	.01320	.02660	.00130
4.959	.310	.00040	.00060	.02150	-.02710	.00120	.02600	.00140
	GRADIENT	.00512	-.00177	-.00015	.00009	.00092	.00004	-.00001

MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (R72202) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 19.000

RUN NO. 3608/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-8.970	.00760	-.00340	.10700	-.08920	.00530	.04010	.01550
.601	-7.070	.00700	-.00250	.09510	-.08370	.00480	.04000	.01500
.601	-5.080	.00590	-.00130	.08280	-.07720	.00410	.03970	.01460
.601	-3.070	.00350	.00000	.07060	-.07010	.00320	.03930	.01370
.601	-1.090	.00190	.00080	.05740	-.06140	.00250	.03750	.01310
.601	.880	.00080	.00200	.04500	-.05330	.00180	.03610	.01340
.601	2.830	-.00030	.00280	.03190	-.04450	.00120	.03480	.01260
.601	4.850	-.00170	.00440	.01860	-.03600	.00040	.03390	.01230
.601	6.840	-.00180	.00540	.00540	-.02870	.00000	.03320	.01260
.601	8.810	-.00270	.00620	-.00740	-.02210	-.00070	.03280	.01280
.601	10.710	-.00420	.00610	-.02080	-.01510	-.00140	.03240	.01290
.601	.850	.00200	.00140	.04580	-.05320	.00210	.03580	.01310
	GRADIENT	-.00064	.00055	-.00655	.00431	-.00035	-.00068	-.00017

RUN NO. 3607/ 0 RN/L = 6.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.897	-9.010	.00400	.00150	.08700	-.06730	.00390	.04860	.01750
.897	-7.060	.00250	.00200	.07640	-.06430	.00320	.04860	.01670
.897	-5.040	.00180	.00210	.06630	-.06150	.00270	.04900	.01600
.897	-3.000	.00190	.00190	.05860	-.05880	.00250	.04700	.01550
.897	-.980	.00250	.00170	.05120	-.05660	.00240	.04650	.01480
.897	1.040	.00330	.00110	.04330	-.05420	.00220	.04500	.01460
.897	3.000	.00150	.00180	.03090	-.04680	.00150	.04280	.01390
.897	5.010	.00040	.00350	.01850	-.03920	.00080	.04210	.01380
.897	6.990	-.00090	.00460	.00550	-.03170	.00000	.04090	.01400
.897	8.970	-.00170	.00520	-.00770	-.02520	-.00050	.04080	.01360
.897	10.880	-.00190	.00580	-.02130	-.01840	-.00100	.04040	.01330
.897	1.030	.00120	.00210	.04430	-.05430	.00190	.04560	.01450
	GRADIENT	-.00002	-.00005	-.00454	.00191	-.00016	-.00070	-.00025

MSFC 545 (1A1) NAR ATP BL SRB-(S1/2) (R72202) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 19.000

RUN NO. 3606/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.997	-9.020	-.00020	.00330	.08200	-.06560	.00290	.06090	.01960
.997	-7.070	.00030	.00340	.07160	-.06250	.00270	.06080	.01870
.997	-5.050	.00030	.00310	.06210	-.05960	.00230	.06020	.01760
.997	-3.000	-.00080	.00380	.05320	-.05670	.00180	.05830	.01680
.997	-.970	-.00010	.00370	.04560	-.05440	.00170	.05690	.01640
.997	1.050	-.00050	.00370	.03780	-.05190	.00130	.05480	.01590
.997	3.050	-.00080	.00390	.02960	-.04890	.00100	.05400	.01540
.997	5.100	-.00220	.00520	.01870	-.04320	.00030	.05200	.01530
.997	7.080	-.00350	.00630	.00580	-.03700	-.00030	.05310	.01470
.997	9.050	-.00380	.00710	-.00730	-.03020	-.00080	.05150	.01470
.997	10.980	-.00510	.00790	-.02150	-.02400	-.00160	.05090	.01440
.997	1.040	-.00070	.00380	.03830	-.05190	.00130	.05640	.01570
	GRADIENT	-.00002	.00001	-.00390	.00128	-.00014	-.00074	-.00023

RUN NO. 3605/ 0 RN/L = 6.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-9.050	.00040	.00280	.07810	-.06090	.00290	.06390	.01460
1.197	-7.080	.00090	.00280	.06720	-.05770	.00260	.06320	.01410
1.197	-5.060	.00050	.00330	.05750	-.05470	.00220	.06220	.01310
1.197	-3.010	.00050	.00280	.04850	-.05170	.00190	.06030	.01220
1.197	-.970	.00090	.00250	.04020	-.04900	.00170	.05840	.01180
1.197	1.050	.00030	.00220	.03200	-.04650	.00130	.05710	.01190
1.197	3.080	.00020	.00260	.02340	-.04340	.00090	.05520	.01210
1.197	5.120	-.00070	.00330	.01290	-.03880	.00040	.05530	.01210
1.197	7.110	-.00080	.00360	.00080	-.03360	.00000	.05520	.01250
1.197	9.100	-.00180	.00500	-.01300	-.02750	-.00070	.05510	.01260
1.197	11.040	-.00300	.00580	-.02650	-.02230	-.00140	.05520	.01260
1.197	1.040	-.00030	.00260	.03210	-.04620	.00110	.05700	.01180
	GRADIENT	-.00007	-.00004	-.00412	.00135	-.00017	-.00082	-.00001

MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (R72202) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 19.000

RUN NO. 3609/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.467	-8.970	-.00270	.00510	.08450	-.06610	.00260	.06020	.01280
1.467	-7.000	-.00180	.00470	.07280	-.06260	.00230	.05950	.01240
1.467	-4.970	-.00270	.00460	.06230	-.05960	.00180	.05860	.01180
1.467	-2.930	-.00120	.00380	.05280	-.05640	.00170	.05620	.01110
1.467	-.880	-.00190	.00420	.04390	-.05340	.00130	.05420	.01100
1.467	1.120	-.00060	.00300	.03380	-.04860	.00120	.05150	.01090
1.467	3.090	-.00110	.00360	.02300	-.04290	.00070	.05020	.01110
1.467	5.120	-.00140	.00420	.01030	-.03690	.00010	.05150	.01150
1.467	7.130	-.00160	.00460	-.00260	-.03140	-.00030	.05200	.01160
1.467	9.120	-.00190	.00530	-.01730	-.02510	-.00080	.05240	.01160
1.467	11.060	-.00420	.00640	-.03200	-.01920	-.00180	.05200	.01190
1.467	1.090	-.00060	.00280	.03470	-.04860	.00120	.05130	.01080
	GRADIENT	.00019	-.00014	-.00484	.00204	-.00013	-.00107	-.00008

RUN NO. 3612/ 0 RN/L = 6.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.955	-9.020	-.00040	.00290	.08500	-.06180	.00310	.05380	.00850
1.955	-7.040	-.00040	.00280	.07080	-.05720	.00250	.05330	.00830
1.955	-5.020	-.00130	.00370	.05950	-.05350	.00200	.05180	.00800
1.955	-2.940	-.00090	.00290	.05030	-.05140	.00170	.05000	.00730
1.955	-.910	-.00070	.00310	.04010	-.04740	.00140	.04710	.00730
1.955	1.090	-.00080	.00280	.02860	-.04190	.00090	.04450	.00720
1.955	3.080	-.00080	.00290	.01690	-.03580	.00050	.04280	.00700
1.955	5.110	-.00100	.00340	.00500	-.03090	.00000	.04260	.00710
1.955	7.130	-.00220	.00390	-.00820	-.02580	-.00060	.04330	.00720
1.955	9.150	-.00250	.00400	-.02300	-.02050	-.00120	.04380	.00730
1.955	11.120	-.00170	.00400	-.03920	-.01490	-.00160	.04260	.00740
1.955	1.040	-.00160	.00310	.02860	-.04090	.00080	.04330	.00690
	GRADIENT	.00001	-.00001	-.00557	.00261	-.00020	-.00121	-.00005

MSFC 545 (IA1) NAR ATP BL SRB-(S1/2) (R72202) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 19.000

RUN NO. 3613/ 0 RN/L = 5.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.959	-9.180	-.00050	.00140	.09340	-.06310	.00340	.03770	.00120
4.959	-7.270	.00000	.00120	.07360	-.05210	.00280	.03370	.00130
4.959	-5.290	-.00190	.00120	.05570	-.04310	.00180	.03030	.00130
4.959	-3.290	.00020	.00090	.04090	-.03540	.00150	.02740	.00130
4.959	-1.270	-.00030	.00110	.02930	-.03030	.00110	.02560	.00130
4.959	.710	-.00020	.00070	.01630	-.02260	.00060	.02260	.00120
4.959	2.690	-.00040	.00100	.00450	-.01720	.00010	.02190	.00130
4.959	4.770	.00010	.00080	-.00710	-.01320	.00000	.02110	.00130
4.959	6.750	.00000	.00070	-.02200	-.00700	-.00070	.01960	.00130
4.959	8.740	.00050	.00090	-.03660	-.00110	-.00090	.01920	.00130
4.959	10.670	-.00330	.00130	-.05460	.00520	-.00240	.01930	.00140
4.959	.690	-.00100	.00070	.01530	-.02210	.00040	.02220	.00130
	GRADIENT	-.00001	-.00001	-.00601	.00286	-.00020	-.00081	.00000

MSFC 545 (IA1) MOD ATP LV-(O1)(T5)(S1) (R72301) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	5.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1505/ 0 RN/L = 5.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-8.080	-.53070	.17800	.00550	-.00430	.00380	.14800	.09320
.601	-5.920	-.39900	.14180	-.00070	-.00280	.00340	.15640	.08740
.601	-3.790	-.28220	.11060	-.00720	-.00100	.00230	.15260	.09260
.601	-1.700	-.17410	.07740	-.00910	-.00030	.00210	.15400	.08940
.601	.410	-.05840	.04250	-.00630	-.00150	.00220	.15060	.08490
.601	2.550	.06070	.00530	-.00480	-.00140	.00220	.14510	.08550
.601	4.680	.19100	-.03360	-.00540	.00000	.00250	.14190	.07780
.601	6.790	.29560	-.06630	-.00380	.00020	.00300	.13200	.07760
.601	8.900	.41720	-.10210	-.00450	.00160	.00290	.12470	.07610
.601	10.930	.52280	-.12660	-.00170	.00150	.00340	.11740	.07410
.601	.410	-.05200	.03940	-.00860	-.00080	.00190	.15180	.08570
	GRADIENT	.05575	-.01701	.00037	.00004	.00002	-.00143	-.00158

RUN NO. 1506/ 0 RN/L = 6.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-8.570	-.60370	.19720	-.00820	.00030	.00240	.17120	.13330
.901	-6.290	-.45880	.15800	-.01160	.00230	.00200	.17800	.12700
.901	-4.040	-.32330	.12130	-.00710	.00070	.00170	.17550	.12920
.901	-1.840	-.19880	.08790	-.01060	.00190	.00170	.18170	.12390
.901	.390	-.06730	.05140	-.00950	.00180	.00100	.17520	.12450
.901	2.630	.06730	.00550	-.00370	-.00080	.00170	.17060	.11990
.901	4.850	.19690	-.03530	.00590	-.00510	.00200	.16480	.11790
.901	7.100	.34350	-.08040	.00480	.00000	.00280	.15870	.11280
.901	9.290	.46550	-.11820	.00330	.00190	.00300	.15050	.11040
.901	11.400	.58460	-.15900	.00780	.00430	.00280	.14100	.10850
.901	.410	-.05590	.04730	-.00680	.00120	.00120	.17500	.12480
	GRADIENT	.05872	-.01778	.00148	-.00064	.00003	-.00146	-.00120

MSFC 545 (IA1) MOD ATP LV-(01)(T5)(S1) (R72301) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 5.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1508/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.991	-8.630	-.65720	.26970	-.00790	.00310	.00260	.23170	.17250
.991	-6.320	-.50860	.22570	-.00560	.00160	.00200	.23710	.16490
.991	-4.040	-.35540	.17460	-.00700	.00130	.00130	.22950	.16080
.991	-1.810	-.21830	.13140	-.00590	.00050	.00160	.23150	.15760
.991	.430	-.08320	.08880	-.00410	.00050	.00190	.22460	.15680
.991	2.670	.05400	.03810	.00110	-.00220	.00260	.22080	.15170
.991	4.950	.20790	-.02280	.00170	-.00020	.00210	.21370	.14860
.991	7.200	.36370	-.08860	.00600	.00140	.00240	.20560	.14010
.991	9.440	.51090	-.13910	.00780	.00320	.00240	.20190	.13700
.991	11.590	.64930	-.19470	.01270	.00650	.00240	.19100	.13180
.991	.450	-.07690	.08940	-.00100	-.00040	.00220	.23160	.15670
	GRADIENT	.06229	-.02174	.00109	-.00025	.00012	-.00189	-.00135

RUN NO. 1507/ 0 RN/L = 6.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.192	-8.850	-.63410	.21640	-.01160	.00730	.00040	.25040	.15240
1.192	-6.450	-.46750	.17160	-.00770	.00540	.00080	.25140	.14920
1.192	-4.140	-.31470	.12870	-.00890	.00360	.00080	.25370	.14490
1.192	-1.830	-.17390	.08640	-.00290	-.00010	.00170	.25150	.14580
1.192	.470	-.02120	.03600	.00080	-.00100	.00180	.24940	.14400
1.192	2.790	.12590	-.01660	-.00030	-.00090	.00180	.24380	.14090
1.192	5.080	.26480	-.05820	.00190	.00130	.00200	.24120	.13860
1.192	7.370	.39080	-.09120	.00630	.00150	.00230	.23580	.13380
1.192	9.630	.50750	-.11430	.01170	.00170	.00300	.23180	.12960
1.192	11.820	.62040	-.13090	.01230	.00550	.00260	.22480	.12690
1.192	.480	-.02010	.03790	-.00130	-.00060	.00140	.25010	.14410
	GRADIENT	.06386	-.02106	.00128	-.00062	.00013	-.00138	-.00060

MSFC 545 (IA1) MOD ATP LV-(O1)(T5)(S1) (R72301) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

BETA =	.000	CONFIG =	5.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1523/ 0 RN/L = 6.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-8.920	-.59270	.16250	-.00850	.00460	-.00170	.24600	.12040
1.463	-6.470	-.41190	.11800	-.00570	.00120	-.00100	.24440	.11580
1.463	-4.140	-.26660	.08400	-.00250	.00000	-.00020	.24400	.11650
1.463	-1.850	-.13830	.05200	.00000	-.00340	.00020	.24350	.11640
1.463	.460	-.00840	.01860	-.00040	-.00150	.00010	.24760	.11340
1.463	2.780	.11810	-.01520	.00360	-.00260	.00030	.24290	.11430
1.463	5.090	.24590	-.05060	.00160	.00020	.00020	.24770	.11420
1.463	7.370	.36300	-.07450	.00370	.00100	.00000	.24760	.11350
1.463	9.670	.48280	-.09020	.00060	.00370	-.00020	.24620	.11230
1.463	11.900	.58130	-.08380	.00430	.00440	.00040	.24070	.11220
1.463	.470	-.00410	.01770	.00210	-.00170	.00030	.24780	.11610
	GRADIENT	.05566	-.01435	.00078	-.00025	.00006	.00003	-.00042

RUN NO. 1530/ 0 RN/L = 6.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.958	-9.000	-.57220	.13760	.00860	-.00390	.00050	.23800	.08580
1.958	-6.520	-.38560	.09090	.00880	-.00450	.00040	.23590	.08450
1.958	-4.130	-.23560	.05600	.00950	-.00560	.00090	.23450	.08240
1.958	-1.840	-.11350	.02660	.00860	-.00480	.00120	.23210	.07990
1.958	.490	.00290	.00700	.00960	-.00430	.00090	.22960	.08030
1.958	2.770	.10380	-.00620	.00950	-.00430	.00090	.22940	.08000
1.958	5.070	.21510	-.02190	.01390	-.00580	.00150	.23500	.07960
1.958	7.410	.33450	-.03700	.01450	-.00490	.00200	.23830	.07890
1.958	9.780	.45380	-.04730	.01820	-.00290	.00230	.22720	.07920
1.958	12.030	.57230	-.05540	.01840	.00010	.00290	.22270	.07900
1.958	.470	.01110	.00700	.01110	-.00470	.00110	.22990	.08010
	GRADIENT	.04927	-.00895	.00004	.00019	-.00001	-.00077	-.00029

RUN NO. 1533/ 0 RN/L = 5.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-4.650	-.28370	.06220	.00000	-.00020	.00010	.20280	.04180
2.990	-1.850	-.14590	.03770	.00190	.00010	-.00010	.20500	.04220
2.990	.370	-.05790	.03180	.00090	-.00060	-.00020	.20210	.04170
2.990	2.590	.03300	.01810	.00130	.00000	.00000	.19760	.04140
2.990	4.800	.12840	.00710	.00460	.00000	.00010	.19430	.04100
2.990	6.980	.22640	-.00550	.00210	.00060	-.00010	.18770	.04070
2.990	9.140	.32610	-.01720	.00690	.00040	.00020	.18120	.04030
2.990	11.280	.43110	-.03630	.00520	.00110	.00050	.17490	.03980
2.990	.400	-.04510	.03030	.00090	-.00050	.00000	.20110	.04220
	GRADIENT	.04306	-.00560	.00037	.00001	.00000	-.00102	-.00010

MSFC 545 (IA1) MCO ATP LV-(O1)(T5)(S1) (R72501) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000		
LREF =	1328.0000 IN.	YMRP =	.0000		
BREF =	1328.0000 IN.	ZMRP =	.0000		
SCALE =	100.0000 PERCNT				

PARAMETRIC DATA

BETA =	.000	CONFIG =	5.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1534/ 0 RN/L = 4.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-4.300	-.22400	.06570	-.00050	-.00050	-.00020	.18990	.01110
4.960	-1.670	-.12440	.05520	.00630	-.00270	.00020	.18280	.01170
4.960	.420	-.05700	.04600	.00490	-.00230	.00020	.17390	.01200
4.960	2.520	.01020	.03380	-.00260	.00130	.00020	.16480	.01210
4.960	4.560	.08080	.01970	-.00400	.00250	-.00030	.15580	.01190
4.960	6.650	.16420	.00910	.00260	-.00040	.00000	.15390	.01160
4.960	8.670	.23790	-.00600	-.00330	.00190	.00000	.14580	.01110
4.960	10.680	.32130	-.02360	.00340	.00000	.00080	.14340	.01100
4.960	.420	-.05080	.04310	.00330	-.00290	-.00030	.17420	.01190
	GRADIENT	.03402	-.00515	-.00067	.00043	-.00001	-.00391	.00009

MSFC 545 (1A1) MOD ATP LV-(01)(T5)(S1) (R72302) (22 FEB 73)

REFERENCE DATA

SREF =	3220.0000 SQ.FT.	XMRP =	.0000
LREF =	1328.0000 IN.	YMRP =	.0000
BREF =	1328.0000 IN.	ZMRP =	.0000
SCALE =	100.0000 PERCNT		

PARAMETRIC DATA

ALPHA =	.000	CONFIG =	5.000
RUDDER =	.000	AILRON =	.000
ORBINC =	.000	DELTAZ =	.120
RUDFLR =	10.000	ELEVTR =	.000

RUN NO. 1504/ 0 RN/L = 5.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.601	-7.740	-.04640	.01330	.27800	-.12340	.04880	.14680	.08630
.601	-5.660	-.05130	.02250	.20630	-.09290	.03870	.15220	.08250
.601	-3.620	-.05580	.03000	.12840	-.05780	.02610	.15080	.08610
.601	-1.560	-.05990	.03680	.05620	-.02470	.01400	.15680	.08220
.601	.490	-.05800	.04160	-.02090	.00990	.00010	.15140	.08830
.601	2.570	-.03360	.03340	-.09720	.04440	-.01420	.15090	.08860
.601	4.640	-.05190	.03510	-.17890	.08080	-.02780	.14780	.09040
.601	6.690	-.03630	.03060	-.24370	.11210	-.03860	.14220	.09510
.601	8.730	-.03500	.02230	-.32070	.14240	-.04930	.14060	.09620
.601	10.690	-.01560	.01250	-.38390	.16700	-.05810	.13650	.10270
.601	.490	-.05770	.03870	-.01980	.01020	-.00080	.15590	.08350
	GRADIENT	.00165	.00033	-.03719	.01677	-.00659	-.00058	.00074

RUN NO. 1503/ 0 RN/L = 6.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-7.930	-.04050	.01970	.31670	-.14610	.05440	.15980	.13410
.901	-5.810	-.04710	.03350	.24030	-.11240	.04310	.16310	.13380
.901	-3.720	-.05260	.03930	.15590	-.07250	.02870	.16700	.13000
.901	-1.610	-.05450	.04760	.06820	-.02900	.01350	.17490	.12650
.901	.490	-.05630	.04880	-.02010	.01220	-.00090	.17420	.12280
.901	2.600	-.04990	.04590	-.10620	.05460	-.01660	.17200	.12380
.901	4.700	-.04000	.04020	-.18990	.09570	-.03130	.17260	.12490
.901	6.830	-.03400	.03380	-.27530	.13430	-.04500	.16690	.12930
.901	8.930	-.02510	.02730	-.35480	.16710	-.05640	.16470	.13690
.901	10.970	-.01950	.02180	-.42960	.19590	-.06660	.16060	.13960
.901	.480	-.05490	.05100	-.01690	.01300	-.00250	.17630	.12180
	GRADIENT	.00142	.00001	-.04114	.01995	-.00713	.00039	-.00061

MSFC 545 (IA1) MOD ATP LV-(01)(T5)(S1) (R72302) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 5.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1501/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.994	-7.990	-.05900	.05410	.34760	-.16790	.06240	.21550	.16270
.994	-5.840	-.06910	.06430	.25510	-.12440	.04660	.21550	.16140
.994	-3.710	-.08040	.07770	.16000	-.07710	.02940	.22510	.15840
.994	-1.620	-.08250	.08700	.06900	-.03110	.01300	.23000	.15730
.994	.500	-.08010	.08610	-.02690	.01600	-.00330	.22980	.15560
.994	2.650	-.07740	.08530	-.12420	.06460	-.02090	.23490	.15490
.994	4.760	-.06830	.08200	-.21490	.11090	-.03760	.23320	.15610
.994	6.900	-.06170	.07610	-.31070	.15710	-.05500	.22800	.15960
.994	9.000	-.04880	.06580	-.39960	.19850	-.07010	.22180	.16360
.994	11.060	-.04450	.06060	-.48690	.23540	-.08350	.21870	.16610
.994	.490	-.08270	.09160	-.02160	.01420	-.00470	.24010	.15520
	GRADIENT	.00138	.00032	-.04446	.02224	-.00792	.00099	-.00033

RUN NO. 1502/ 0 RN/L = 6.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.195	-8.100	-.01540	.00740	.33270	-.14220	.06070	.24210	.14660
1.195	-5.920	-.02150	.01480	.24550	-.10710	.04670	.24590	.14550
1.195	-3.760	-.03120	.03050	.15410	-.06680	.03010	.24910	.14380
1.195	-1.630	-.04320	.04550	.06930	-.03050	.01430	.24960	.14360
1.195	.500	-.04030	.04890	-.01660	.00770	-.00200	.24890	.14650
1.195	2.670	-.03120	.03800	-.10350	.04560	-.01830	.24930	.14650
1.195	4.820	-.02400	.03180	-.19140	.08560	-.03600	.24820	.14730
1.195	6.980	-.00560	.01560	-.28130	.12220	-.05210	.24900	.14450
1.195	9.130	.00080	.00900	-.37220	.15850	-.06630	.24700	.14630
1.195	11.220	-.00060	.00600	-.45970	.18820	-.07920	.24540	.14870
1.195	.500	-.03610	.04310	-.01850	.00860	-.00420	.25180	.14510
	GRADIENT	.00124	-.00024	-.04025	.01775	-.00768	-.00010	.00046

MSFC 545 (IA1) MOD ATP LV-(01)(T5)(S1) (R72302) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 5.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1526/ 0 RN/L = 6.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.460	-8.150	-.01620	.00020	.33190	-.13540	.05680	.25170	.12200
1.460	-5.940	-.01520	.00670	.24000	-.10200	.04400	.25300	.11600
1.460	-3.770	-.01380	.01230	.15170	-.06630	.02870	.25100	.11540
1.460	-1.650	-.01630	.01800	.06630	-.02980	.01230	.24950	.11670
1.460	.520	-.01670	.02060	-.02460	.01010	-.00420	.25000	.11420
1.460	2.700	-.01080	.01680	-.11510	.05030	-.02100	.25220	.11670
1.460	4.870	-.00940	.01480	-.20290	.08700	-.03730	.25280	.12060
1.460	7.020	-.00220	.00920	-.29090	.12050	-.05190	.25260	.11760
1.460	9.230	-.00300	.00720	-.38220	.14970	-.06560	.25210	.11940
1.460	11.370	-.01350	.00890	-.48210	.17910	-.07880	.25430	.11900
1.460	.530	-.01670	.02160	-.02700	.01070	-.00650	.24620	.11410
	GRADIENT	.00066	.00017	-.04118	.01788	-.00764	.00029	.00048

RUN NO. 1527/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.977	-8.250	-.03190	.01500	.32940	-.11550	.04630	.24070	.08190
1.977	-6.010	-.01670	.00520	.23230	-.08210	.03230	.23600	.08250
1.977	-3.820	-.00500	.00220	.14620	-.05160	.02020	.23600	.08030
1.977	-1.680	-.00310	.00200	.06280	-.02110	.00880	.23290	.07850
1.977	.540	-.00420	.00380	-.02670	.01220	-.00460	.23010	.07880
1.977	2.700	-.00120	.00380	-.11050	.04350	-.01690	.23580	.07970
1.977	4.910	-.00830	.01020	-.19540	.07370	-.02880	.24390	.07910
1.977	7.130	-.01600	.01500	-.28910	.10400	-.04240	.24790	.07820
1.977	9.340	-.02470	.02030	-.38480	.13500	-.05620	.24780	.07860
1.977	11.480	-.03430	.02740	-.48520	.16730	-.07090	.24860	.08190
1.977	.520	.00000	.00460	-.02460	.01190	-.00610	.22850	.08000
	GRADIENT	-.00022	.00082	-.03922	.01443	-.00566	.00086	-.00005

RUN NO. 1536/ 0 RN/L = 5.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-4.360	-.01770	.02500	.15590	-.04790	.01780	.20260	.04270
2.990	-1.680	-.02230	.02960	.06200	-.01830	.00730	.19980	.04170
2.990	.470	-.01830	.02750	-.01100	.00360	-.00150	.19940	.04180
2.990	2.660	-.01810	.02680	-.08700	.02950	-.01110	.20240	.04210
2.990	4.750	-.01370	.02610	-.15790	.05270	-.01970	.20660	.04240
2.990	6.890	-.01270	.02360	-.23530	.07510	-.02850	.21130	.04250
2.990	9.000	-.01160	.02380	-.30850	.09620	-.03760	.21240	.04290
2.990	11.030	-.01170	.02490	-.38600	.12050	-.04730	.21460	.04350
2.990	.490	-.01820	.02780	-.01120	.00370	-.00300	.20000	.04210
	GRADIENT	.00051	-.00000	-.03443	.01103	-.00414	.00044	-.00001

MSFC 545 (IA1) MOD ATP LV-(01)(T5)(S1) (R72302) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 5.000
RUDDER = .000 AILRON = .000
ORBINC = .000 DELTAZ = .120
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 1535/ 0 RN/L = 4.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-4.180	-.03550	.03860	.11340	-.03490	.01180	.18180	.01070
4.960	-1.610	-.03660	.04190	.05040	-.01420	.00520	.17620	.01100
4.960	.490	-.03820	.03970	-.01270	.00340	-.00160	.17590	.01100
4.960	2.570	-.03930	.04060	-.06600	.01990	-.00720	.17780	.01130
4.960	4.600	-.04000	.04300	-.11120	.03480	-.01230	.18160	.01160
4.960	6.610	-.02750	.04040	-.16900	.05990	-.01790	.18630	.01180
4.960	8.640	-.02820	.03740	-.23830	.08760	-.02600	.19000	.01200
4.960	10.600	-.02850	.03900	-.30610	.11710	-.03600	.19700	.01210
4.960	.480	-.03470	.03940	-.00940	.00390	-.00220	.17630	.01150
	GRADIENT	-.00054	.00035	-.02602	.00799	-.00279	.00002	.00010

MSFC 545 (IA1) NAR ATP BL ORBITER-(O1) (R72501) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2724/ 0 RN/L = 4.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-10.770	-.56090	.39470	.01430	-.01320	.00650	.00550	.01950
.600	-8.660	-.46570	.33290	.01580	-.01380	.00660	.00880	.02070
.600	-6.590	-.36420	.26530	.01360	-.01260	.00600	.01480	.01970
.600	-4.520	-.26400	.19770	.01190	-.01140	.00530	.02100	.02020
.600	-2.380	-.16020	.12910	.01140	-.01080	.00470	.02520	.02160
.600	-.290	-.05990	.06250	.00920	-.00870	.00450	.02720	.02180
.600	1.780	.03790	-.00350	.00630	-.00670	.00370	.02660	.02220
.600	3.760	.12610	-.06430	.00250	-.00380	.00310	.02400	.02100
.600	4.780	.15240	-.08300	.02270	-.01580	.00780	.02150	.02300
.600	6.880	.25390	-.15310	.01980	-.01370	.00710	.01550	.02240
.600	8.990	.35800	-.22770	.01960	-.01380	.00700	.01040	.02270
.600	11.100	.46900	-.30430	.01700	-.01180	.00680	.00650	.02400
.600	-.240	-.05590	.06000	.00880	-.00870	.00430	.02620	.02290
	GRADIENT	.04559	-.03073	.00019	.00012	.00006	.00003	.00018

RUN NO. 2723/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-11.220	-.66440	.48750	.01770	-.01520	.00620	.02390	.03470
.900	-9.040	-.56500	.41950	.01620	-.01400	.00510	.02610	.03070
.900	-6.910	-.46290	.34970	.01680	-.01490	.00580	.02920	.02640
.900	-4.760	-.35500	.27670	.01540	-.01400	.00550	.03110	.02420
.900	-2.550	-.23610	.19560	.01340	-.01230	.00430	.03160	.02580
.900	-.370	-.12980	.12320	.01300	-.01190	.00460	.03520	.02350
.900	1.800	-.00410	.03680	.00910	-.00890	.00340	.03200	.02510
.900	3.860	.10290	-.03780	.00720	-.00730	.00330	.02850	.02430
.900	11.540	.50230	-.31670	.01060	-.00750	.00630	.02490	.03140
.900	4.930	.14650	-.06960	.02350	-.01740	.00700	.02660	.02530
.900	7.140	.27130	-.15820	.02070	-.01560	.00650	.02430	.02500
.900	9.340	.38390	-.23510	.01660	-.01240	.00660	.02410	.02790
.900	-.350	-.11890	.11590	.01250	-.01160	.00450	.03310	.02540
	GRADIENT	.05251	-.03638	-.00012	.00028	.00009	-.00051	.00037

MSFC 545 (IA1) NAR ATP BL ORBITER-(O1) (R72501) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2722/ 0 RN/L = 6.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.195	-11.370	-.72320	.57250	.01840	-.01660	.00600	.05500	.04440
1.195	-9.130	-.59620	.48200	.01730	-.01570	.00570	.05770	.04380
1.195	-6.940	-.47180	.39260	.01650	-.01510	.00560	.06180	.04380
1.195	-4.750	-.34090	.29670	.01410	-.01340	.00520	.06490	.04350
1.195	-2.500	-.20290	.19550	.01270	-.01230	.00430	.06690	.04350
1.195	-.270	-.06740	.09540	.01050	-.01040	.00370	.06860	.04210
1.195	1.940	.07800	-.01170	.00810	-.00790	.00350	.07140	.03830
1.195	4.060	.20590	-.10760	.00410	-.00470	.00240	.06890	.03950
1.195	5.170	.25450	-.14550	.01610	-.01100	.00570	.06350	.04220
1.195	7.430	.39070	-.24660	.01180	-.00760	.00490	.06290	.04110
1.195	9.680	.51990	-.34050	.00760	-.00410	.00360	.06220	.04180
1.195	11.930	.64910	-.43310	.00290	-.00070	.00210	.06190	.04330
1.195	-.250	-.05700	.08810	.01170	-.01100	.00390	.06850	.04240
	GRADIENT	.06242	-.04613	-.00111	.00099	-.00029	.00057	-.00060

RUN NO. 2713/ 0 RN/L = 6.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.953	-11.140	-.45530	.34770	.00960	-.00720	.00270	.07090	.01690
1.953	-8.950	-.36610	.28410	.01030	-.00810	.00310	.06970	.01890
1.953	-6.800	-.27990	.22360	.00880	-.00700	.00290	.07190	.01930
1.953	-4.620	-.18680	.15700	.00790	-.00640	.00300	.07120	.02080
1.953	-2.470	-.10300	.09740	.00680	-.00550	.00260	.07280	.02110
1.953	-.250	-.00780	.02940	.00680	-.00530	.00280	.07170	.02230
1.953	1.870	.08220	-.03570	.00450	-.00330	.00210	.07120	.02220
1.953	3.920	.16290	-.09330	.00300	-.00200	.00160	.07140	.02220
1.953	4.990	.18100	-.10830	.01330	-.00840	.00390	.06720	.02530
1.953	7.180	.26100	-.16540	.01070	-.00610	.00310	.06620	.02660
1.953	9.350	.33700	-.21950	.00870	-.00440	.00290	.06470	.02730
1.953	11.530	.41500	-.27530	.00620	-.00240	.00250	.06390	.02630
1.953	-.240	-.00200	.02490	.00700	-.00540	.00280	.07120	.02240
	GRADIENT	.03956	-.02847	.00011	.00009	-.00001	-.00032	.00035

MSFC 545 (IA1) NAR ATP BL ORBITER-(01) (R72501) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2702/ 0 RN/L = 5.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-10.740	-.29130	.21300	.01020	-.00660	.00250	.06350	.01040
2.990	-8.680	-.23700	.17470	.00810	-.00500	.00200	.06200	.01090
2.990	-6.570	-.18410	.13730	.00880	-.00540	.00220	.06020	.01180
2.990	-4.450	-.12770	.09810	.00820	-.00490	.00200	.05780	.01230
2.990	-2.410	-.07660	.06280	.00730	-.00440	.00180	.05760	.01260
2.990	-.320	-.02250	.02550	.00720	-.00440	.00170	.05500	.01280
2.990	1.730	.02960	-.01070	.00590	-.00330	.00160	.05330	.01300
2.990	3.730	.08060	-.04590	.00530	-.00290	.00140	.05120	.01330
2.990	4.700	.09630	-.05320	.00770	-.00410	.00190	.06370	.01340
2.990	6.770	.15490	-.09350	.00620	-.00320	.00170	.06230	.01340
2.990	8.840	.21620	-.13650	.00410	-.00170	.00130	.06040	.01360
2.990	10.920	.27870	-.17970	.00330	-.00130	.00150	.05870	.01370
2.990	-.310	-.02030	.02380	.00720	-.00430	.00200	.05360	.01310
	GRADIENT	.02490	-.01698	-.00017	.00016	-.00003	.00001	.00012

RUN NO. 2701/ 0 RN/L = 4.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-10.450	-.20760	.14900	.00710	-.00410	.00120	.06880	.00240
4.960	-8.460	-.17070	.12290	.00650	-.00390	.00100	.06560	.00270
4.960	-6.390	-.13970	.10080	.00590	-.00330	.00100	.06330	.00270
4.960	-4.320	-.10470	.07730	.00570	-.00320	.00140	.06150	.00280
4.960	-2.340	-.07770	.05840	.00510	-.00280	.00150	.05990	.00300
4.960	-.300	-.04530	.03670	.00450	-.00230	.00140	.05740	.00310
4.960	1.690	-.01060	.01250	.00270	-.00140	.00060	.05300	.00340
4.960	3.640	.03360	-.01720	.00420	-.00260	.00140	.05210	.00340
4.960	4.620	.04730	-.02500	.00600	-.00300	.00170	.05670	.00320
4.960	6.670	.08700	-.05240	.00420	-.00180	.00130	.05440	.00340
4.960	8.680	.13310	-.08460	.00240	-.00040	.00100	.05190	.00350
4.960	10.720	.18210	-.11770	.00180	.00000	.00100	.04970	.00360
4.960	-.320	-.04480	.03620	.00450	-.00250	.00100	.05640	.00340
	GRADIENT	.01743	-.01179	-.00007	.00005	-.00000	-.00086	.00006

MSFC 545 (1A1) NAR ATP BL ORBITER-(01) (REFERENCE) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = 10.000

RUN NO. 2719/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-10.670	-.34910	.21950	.00910	-.00810	.00360	.01520	.02540
.600	-8.530	-.23680	.14510	.00930	-.00810	.00380	.02180	.02620
.600	-6.470	-.13420	.07640	.00680	-.00630	.00350	.02960	.02570
.600	-4.400	-.03340	.00880	.00430	-.00460	.00240	.03560	.02590
.600	-2.270	.06480	-.05730	.00140	-.00220	.00170	.04090	.02630
.600	-.190	.17290	-.13060	.00080	-.00190	.00140	.04270	.02610
.600	1.910	.27400	-.19890	-.00200	.00080	.00070	.04030	.02640
.600	3.900	.36300	-.26000	-.00730	.00480	-.00060	.03820	.02380
.600	-.130	.17910	-.13440	-.00020	-.00080	.00090	.04260	.02600
	GRADIENT	.04824	-.03270	-.00128	.00105	-.00034	.00023	-.00019

RUN NO. 2720/ 0 RN/L = 6.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.901	-11.140	-.51060	.35210	.01350	-.01160	.00510	.03820	.04060
.901	-8.930	-.40980	.28440	.01220	-.01030	.00420	.03990	.03650
.901	-6.800	-.29730	.20790	.01100	-.00950	.00390	.04360	.03400
.901	-4.620	-.17600	.12450	.00970	-.00850	.00280	.04900	.03290
.901	-2.440	-.05380	.04030	.00880	-.00780	.00300	.05420	.03450
.901	-.280	.06810	-.04370	.00780	-.00660	.00250	.05960	.03450
.901	1.910	.18960	-.12850	.00180	-.00190	.00070	.05890	.03410
.901	4.010	.31020	-.21370	-.00180	.00100	.00000	.05610	.03410
.901	-.170	.08230	-.05310	.00520	-.00490	.00160	.05790	.03480
	GRADIENT	.05628	-.03912	-.00139	.00115	-.00037	.00088	.00009

RUN NO. 2721/ 0 RN/L = 6.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-11.290	-.57620	.43860	.01370	-.01230	.00370	.05970	.05180
1.196	-9.060	-.45320	.35080	.01370	-.01220	.00370	.06650	.05190
1.196	-6.860	-.31980	.25440	.01160	-.01060	.00330	.07370	.05010
1.196	-4.640	-.18450	.15570	.00920	-.00830	.00210	.08070	.04950
1.196	-2.420	-.04540	.05340	.00760	-.00700	.00150	.08670	.04770
1.196	-.170	.09910	-.05330	.00640	-.00560	.00160	.09240	.04540
1.196	2.020	.23870	-.15760	.00250	-.00220	.00070	.09490	.04390
1.196	4.150	.37140	-.25610	-.00080	.00060	.00040	.09500	.04330
1.196	-.140	.10780	-.05980	.00600	-.00530	.00130	.09240	.04550
	GRADIENT	.06340	-.04699	-.00114	.00102	-.00019	.00168	-.00074

MSFC 545 (IA1) NAR ATP BL ORBITER-(O1) (R72502) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = 10.000

RUN NO. 2714/ 0 RN/L = 6.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.956	-11.080	-.38140	.27960	.00660	-.00490	.00150	.06840	.01970
1.956	-8.890	-.29250	.21700	.00730	-.00540	.00220	.06950	.02150
1.956	-6.760	-.21080	.15970	.00670	-.00500	.00200	.07400	.02130
1.956	-4.590	-.12280	.09770	.00550	-.00410	.00200	.07620	.02290
1.956	-2.430	-.03510	.03540	.00490	-.00360	.00190	.07930	.02310
1.956	-.210	.06180	-.03330	.00500	-.00330	.00190	.08180	.02350
1.956	1.900	.14860	-.09600	.00320	-.00190	.00130	.08360	.02340
1.956	3.940	.23230	-.15550	.00200	-.00060	.00110	.08450	.02420
1.956	-.230	.06150	-.03330	.00490	-.00360	.00190	.08100	.02370
	GRADIENT	.04180	-.02982	-.00040	.00040	-.00011	.00098	.00014

RUN NO. 2710/ 0 RN/L = 5.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-10.720	-.25700	.18270	.01060	-.00670	.00250	.06990	.01070
2.990	-8.670	-.20750	.14790	.00950	-.00610	.00210	.06940	.01120
2.990	-6.560	-.15360	.11080	.00870	-.00530	.00200	.06900	.01190
2.990	-4.440	-.10000	.07350	.00760	-.00460	.00160	.06870	.01240
2.990	-2.360	-.04300	.03420	.00700	-.00420	.00150	.06850	.01280
2.990	-.310	.01030	-.00320	.00650	-.00380	.00130	.06870	.01290
2.990	1.740	.06600	-.04190	.00560	-.00310	.00130	.06810	.01330
2.990	3.740	.11940	-.07910	.00480	-.00240	.00110	.06820	.01360
2.990	-.320	.01210	-.00420	.00650	-.00370	.00130	.06870	.01300
	GRADIENT	.02677	-.01864	-.00034	.00027	-.00006	-.00007	.00014

RUN NO. 2709/ 0 RN/L = 4.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-10.440	-.18430	.12870	.00610	-.00360	.00100	.07140	.00260
4.960	-8.450	-.15630	.10870	.00600	-.00330	.00120	.07000	.00270
4.960	-6.380	-.11810	.08300	.00530	-.00300	.00130	.06740	.00290
4.960	-4.320	-.09340	.06520	.00470	-.00280	.00090	.06620	.00280
4.960	-2.300	-.06300	.04430	.00300	-.00180	.00030	.06470	.00310
4.960	-.300	-.02670	.02000	.00290	-.00160	.00040	.06350	.00310
4.960	1.700	.01480	-.00880	.00400	-.00230	.00080	.06140	.00330
4.960	3.650	.06040	-.03990	.00330	-.00160	.00110	.06080	.00350
4.960	-.280	-.02670	.02000	.00350	-.00210	.00040	.06330	.00350
	GRADIENT	.01931	-.01319	-.00009	.00010	.00004	-.00071	.00008

MSFC 545 (IA1) NAR ATP BL ORBITER-(01) (R72503) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = -20.000

RUN NO. 2718/ 0 RN/L = 5.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.603	-10.940	-.87790	.67400	.02720	-.02440	.00910	.04670	.02900
.603	-8.830	-.80180	.62790	.02710	-.02430	.00760	.05460	.02280
.603	-6.770	-.72410	.57920	.02450	-.02280	.00570	.05960	.02060
.603	-4.720	-.65780	.54060	.02780	-.02540	.01040	.06460	.01870
.603	-2.600	-.55860	.47460	.02600	-.02420	.00600	.06840	.01830
.603	-.500	-.46830	.41580	.02400	-.02240	.00480	.07410	.01790
.603	1.560	-.36850	.34730	.02000	-.01930	.00600	.07620	.01690
.603	3.550	-.28030	.28650	.01790	-.01760	.00720	.07300	.01620
.603	-.500	-.46720	.41460	.02110	-.02050	.00440	.07510	.01710
	GRADIENT	.04565	-.03069	-.00125	.00099	-.00032	.00120	-.00031

RUN NO. 2717/ 0 RN/L = 6.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.897	-11.420	-.93330	.73930	.02670	-.02370	.00760	.06870	.05940
.897	-9.250	-.85510	.69310	.02740	-.02450	.00780	.07620	.05380
.897	-7.130	-.78100	.64560	.02800	-.02500	.00770	.08020	.04500
.897	-4.990	-.68770	.58610	.02560	-.02330	.00720	.08700	.04050
.897	-2.790	-.57040	.50610	.02540	-.02290	.00580	.09320	.03930
.897	-.630	-.46080	.42930	.02350	-.02150	.00510	.09700	.03590
.897	1.540	-.33580	.33900	.02120	-.01920	.00580	.08970	.03570
.897	3.620	-.22790	.26360	.01820	-.01710	.00520	.08600	.03490
.897	-.560	-.45360	.42380	.02400	-.02190	.00530	.09620	.03560
	GRADIENT	.05356	-.03768	-.00088	.00074	-.00019	-.00024	-.00069

RUN NO. 2716/ 0 RN/L = 6.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.203	-11.630	-.97280	.80460	.02690	-.02480	.00650	.13290	.04490
1.203	-9.390	-.85840	.72510	.02610	-.02440	.00650	.13210	.04290
1.203	-7.200	-.74980	.65060	.02670	-.02500	.00590	.13340	.04250
1.203	-4.990	-.63240	.56780	.02670	-.02480	.00600	.13360	.04340
1.203	-2.770	-.50350	.47540	.02400	-.02290	.00480	.13170	.04460
1.203	-.550	-.37540	.38230	.02190	-.02140	.00420	.12940	.04560
1.203	1.670	-.23350	.27640	.01900	-.01900	.00300	.12410	.04570
1.203	3.800	-.09260	.17020	.01870	-.01870	.00260	.11690	.04650
1.203	-.480	-.36910	.37740	.02190	-.02110	.00410	.12930	.04560
	GRADIENT	.06127	-.04513	-.00096	.00073	-.00039	-.00185	.00033

MSFC 545 (IA1) NAR ATP BL ORBITER-(01) (R72503) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = -20.000

RUN NO. 2715/ 0 RN/L = 6.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.962	-11.250	-.60050	.49050	.01510	-.01300	.00210	.12350	.01560
1.962	-9.040	-.49910	.41590	.01470	-.01250	.00230	.11750	.01600
1.962	-6.900	-.41060	.35170	.01380	-.01200	.00240	.11430	.01590
1.962	-4.730	-.31650	.28240	.01160	-.01050	.00170	.10940	.01670
1.962	-2.550	-.22230	.21320	.01130	-.01010	.00200	.10410	.01800
1.962	-.320	-.13250	.14890	.01070	-.00950	.00210	.10130	.01890
1.962	1.770	-.04270	.08320	.00900	-.00800	.00160	.09730	.01960
1.962	3.820	.04740	.01610	.00680	-.00600	.00110	.09140	.02040
1.962	-.340	-.12970	.14580	.01070	-.00960	.00200	.10040	.01870
	GRADIENT	.04235	-.03093	-.00055	.00051	-.00007	-.00200	.00042

RUN NO. 2707/ 0 RN/L = 5.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-10.790	-.38540	.30880	.00870	-.00620	.00030	.10470	.00990
2.990	-8.730	-.33010	.26770	.00880	-.00610	.00060	.10000	.01000
2.990	-6.620	-.26940	.22290	.00750	-.00520	.00030	.09490	.01050
2.990	-4.490	-.20680	.17780	.00760	-.00510	.00040	.08970	.01070
2.990	-2.430	-.14810	.13530	.00720	-.00490	.00050	.08510	.01110
2.990	-.350	-.09160	.09440	.00610	-.00420	.00030	.08070	.01140
2.990	1.690	-.03730	.05530	.00580	-.00380	.00040	.07600	.01190
2.990	3.690	.01660	.01740	.00470	-.00290	.00020	.07280	.01220
2.990	-.350	-.09010	.09340	.00690	-.00460	.00060	.08020	.01160
	GRADIENT	.02723	-.01957	-.00035	.00027	-.00002	-.00210	.00019

RUN NO. 2708/ 0 RN/L = 4.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.960	-10.470	-.29120	.23470	.00650	-.00500	-.00080	.10240	.00250
4.960	-8.460	-.25240	.20480	.00640	-.00470	-.00060	.09500	.00270
4.960	-6.400	-.21130	.17130	.00470	-.00380	-.00090	.08830	.00280
4.960	-4.340	-.16950	.14000	.00460	-.00380	-.00080	.08300	.00290
4.960	-2.340	-.13220	.11280	.00450	-.00350	-.00010	.07890	.00280
4.960	-.310	-.09720	.08780	.00380	-.00290	-.00020	.07480	.00330
4.960	1.680	-.05490	.05840	.00310	-.00260	-.00020	.06980	.00310
4.960	3.630	-.01630	.03040	.00310	-.00220	.00000	.06680	.00330
4.960	-.330	-.09250	.08560	.00490	-.00330	.00030	.07480	.00350
	GRADIENT	.01922	-.01370	-.00022	.00021	.00008	-.00208	.00006

MSFC 545 (IA1) NAR ATP BL ORBITER-(01) (R72504) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2725/ 0 RN/L = 4.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.603	-10.120	-.03140	.03560	.16930	-.11940	.04530	.02740	.01750
.603	-8.170	-.02740	.03550	.13940	-.09960	.03920	.03020	.01610
.603	-6.130	-.03080	.03940	.10870	-.07890	.03180	.03250	.01460
.603	-4.080	-.02590	.03740	.07300	-.05360	.02300	.03320	.01520
.603	-2.020	-.02770	.04040	.03600	-.02700	.01360	.03370	.01560
.603	.000	-.01970	.03630	.00150	-.00180	.00450	.03050	.01870
.603	2.020	-.01500	.03330	-.03070	.02170	-.00370	.02680	.02190
.603	4.100	-.00850	.02820	-.06740	.04840	-.01360	.02540	.02150
.603	6.170	-.00390	.02390	-.10430	.07460	-.02360	.02290	.02280
.603	8.170	.00230	.01860	-.13630	.09680	-.03130	.02170	.02290
.603	10.140	.00290	.01750	-.16770	.11740	-.03820	.01910	.02510
.603	.000	-.01950	.03650	.00470	-.00390	.00540	.02910	.02040
	GRADIENT	.00233	-.00125	-.01704	.01239	-.00444	-.00110	.00092

RUN NO. 2726/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.897	-10.300	-.09100	.09000	.18060	-.12720	.04620	.03460	.02310
.897	-8.310	-.08460	.08660	.14930	-.10790	.04020	.03640	.02060
.897	-6.230	-.08430	.09040	.11260	-.08240	.03220	.03870	.01980
.897	-4.150	-.08270	.09070	.07790	-.05760	.02360	.03810	.02010
.897	-2.050	-.08040	.09070	.03990	-.02990	.01340	.03960	.01970
.897	.000	-.07720	.08970	.00260	-.00270	.00320	.03580	.02270
.897	2.050	-.06880	.08310	-.03440	.02420	-.00660	.03250	.02510
.897	4.170	-.06160	.07740	-.07350	.05310	-.01750	.02990	.02700
.897	6.250	-.05600	.07240	-.11380	.08220	-.02750	.02880	.02720
.897	8.310	-.05170	.07060	-.14640	.10490	-.03660	.02700	.02970
.897	10.330	-.04660	.06380	-.18060	.12680	-.04330	.02190	.03360
.897	.000	-.07410	.08690	.00290	-.00290	.00320	.03690	.02160
	GRADIENT	.00259	-.00165	-.01818	.01328	-.00493	-.00113	.00092

MSFC 545 (IA1) NAR ATP BL ORBITER-(01) (R72504) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2727/ 0 RN/L = 6.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.196	-10.420	-.06020	.08320	.18570	-.12990	.05630	.06330	.04120
1.196	-8.400	-.05080	.07840	.14750	-.10470	.04700	.06530	.04130
1.196	-6.290	-.03740	.06970	.10790	-.07700	.03610	.06640	.04000
1.196	-4.180	-.02960	.06560	.06610	-.04700	.02390	.06740	.03950
1.196	-2.060	-.02070	.06060	.02940	-.02050	.01260	.06830	.03950
1.196	.010	-.00930	.05280	-.00550	.00390	.00190	.06860	.03920
1.196	2.110	-.00020	.04590	-.04080	.02900	-.00920	.07070	.03670
1.196	4.250	.00670	.04060	-.08010	.05740	-.02180	.07020	.03720
1.196	6.340	.01230	.03420	-.12010	.08600	-.03400	.06630	.03800
1.196	8.430	.01040	.03560	-.15860	.11240	-.04530	.06370	.04120
1.196	10.480	.01080	.03370	-.19530	.13600	-.05510	.06140	.04120
1.196	.010	-.00450	.04960	-.00480	.00310	.00190	.06910	.03910
	GRADIENT	.00443	-.00308	-.01724	.01228	-.00538	.00038	-.00035

RUN NO. 2712/ 0 RN/L = 6.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.958	-4.210	.01440	.01240	.06900	-.04800	.02020	.07030	.02220
1.958	-2.070	.01920	.00860	.02970	-.02060	.00960	.06940	.02230
1.958	.030	.02530	.00450	-.00620	.00480	.00000	.06980	.02210
1.958	2.120	.03070	.00150	-.04070	.02880	-.00940	.07050	.02260
1.958	4.240	.02990	.00180	-.07860	.05480	-.01940	.07070	.02260
1.958	6.410	.03140	.00080	-.11670	.08000	-.02920	.07060	.02310
1.958	8.510	.02750	.00300	-.15280	.10320	-.03800	.07040	.02310
1.958	10.530	.02200	.00650	-.18880	.12560	-.04620	.06990	.02340
1.958	6.370	.03070	.00070	-.11650	.07970	-.02910	.06900	.02340
	GRADIENT	.00201	-.00134	-.01734	.01209	-.00466	.00009	.00005

MSFC 545 (1A1) NAR ATP BL ORBITER-(01) (R72504) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2703/ 0 RN/L = 5.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-10.320	-.02940	.03200	.14810	-.09310	.03460	.06670	.01280
2.990	-6.240	-.01860	.02410	.08500	-.05340	.01990	.06470	.01280
2.990	-8.310	-.02300	.02760	.11630	-.07310	.02720	.06600	.01260
2.990	-4.160	-.01470	.02180	.05490	-.03430	.01290	.06380	.01290
2.990	-2.090	-.01240	.02050	.02630	-.01620	.00640	.06340	.01290
2.990	.000	-.00990	.01900	-.00250	.00180	-.00010	.06350	.01300
2.990	2.070	-.00860	.01800	-.03060	.01970	-.00650	.06350	.01290
2.990	4.150	-.00820	.01770	-.06030	.03850	-.01350	.06350	.01310
2.990	6.280	-.00890	.01830	-.09140	.05830	-.02080	.06420	.01330
2.990	8.320	-.01200	.02060	-.12370	.07860	-.02840	.06570	.01300
2.990	10.330	-.01740	.02390	-.15560	.09850	-.03580	.06640	.01360
2.990	.000	-.00980	.01900	-.00350	.00200	-.00040	.06350	.01320
	GRADIENT	.00081	-.00051	-.01383	.00873	-.00316	-.00002	.00002

RUN NO. 2704/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.959	-10.060	-.04560	.03900	.11330	-.06790	.02640	.06580	.00290
4.959	-8.110	-.04250	.03710	.08730	-.05150	.02020	.06430	.00290
4.959	-6.080	-.03790	.03300	.06460	-.03810	.01450	.06150	.00340
4.959	-4.050	-.03670	.03240	.04190	-.02440	.00970	.06070	.00340
4.959	-2.020	-.03760	.03270	.01920	-.01100	.00440	.06020	.00330
4.959	.000	-.03580	.03190	-.00280	.00180	-.00060	.05960	.00350
4.959	2.050	-.03540	.03100	-.02550	.01520	-.00560	.06140	.00310
4.959	4.060	-.03660	.03150	-.04820	.02880	-.01080	.06050	.00340
4.959	6.130	-.03660	.03180	-.07080	.04250	-.01610	.06160	.00340
4.959	8.140	-.03480	.03180	-.09510	.05740	-.02200	.06380	.00330
4.959	10.070	-.04240	.03630	-.11940	.07230	-.02800	.06550	.00310
4.959	-.010	-.03730	.03310	-.00280	.00190	-.00040	.06060	.00360
	GRADIENT	.00012	-.00017	-.01108	.00654	-.00251	.00004	-.00001

MSFC 545 (IA1) NAR ATP BL ORBITER-(01) (R72505) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = -5.000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2730/ 0 RN/L = 4.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.602	-10.130	-.29780	.21410	.17920	-.12690	.04140	.01530	.01760
.602	-8.190	-.29390	.21300	.14840	-.10610	.03620	.01800	.01740
.602	-6.140	-.29710	.21670	.11550	-.08360	.03010	.01860	.01790
.602	-4.090	-.29380	.21630	.07710	-.05550	.02120	.02100	.01740
.602	-2.050	-.29070	.21490	.04370	-.03210	.01390	.02230	.01740
.602	.000	-.29210	.21660	.00700	-.00590	.00630	.02230	.01720
.602	2.030	-.28350	.21100	-.02440	.01710	-.00100	.01830	.02160
.602	4.120	-.27390	.20330	-.06550	.04670	-.01030	.01750	.02190
.602	6.170	-.26790	.19800	-.10250	.07320	-.01910	.01470	.02310
.602	8.170	-.25870	.19060	-.13430	.09490	-.02540	.01340	.02330
.602	10.130	-.24920	.18360	-.16170	.11340	-.03060	.01210	.02380
.602	-.010	-.29250	.21740	.01180	-.00910	.00720	.02170	.01830
	GRADIENT	.00230	-.00146	-.01724	.01237	-.00380	-.00054	.00064

RUN NO. 2729/ 0 RN/L = 6.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-10.350	-.39300	.29720	.20320	-.14340	.04510	.02530	.02610
.903	-8.360	-.39950	.30620	.16840	-.12100	.03900	.02910	.02640
.903	-6.260	-.38690	.29650	.12960	-.09430	.03170	.02970	.02380
.903	-4.180	-.38120	.29480	.09030	-.06590	.02300	.03100	.02400
.903	-2.090	-.38050	.29550	.04750	-.03460	.01340	.03340	.02290
.903	-.010	-.37890	.29490	.00880	-.00620	.00470	.03400	.02250
.903	2.040	-.36560	.28350	-.03170	.02350	-.00430	.02770	.02650
.903	4.180	-.36960	.28870	-.07340	.05440	-.01410	.02780	.02820
.903	6.240	-.35840	.27730	-.11320	.08300	-.02230	.02470	.02870
.903	8.310	-.36330	.28300	-.14890	.10760	-.02990	.02570	.02960
.903	10.320	-.34970	.26970	-.17900	.12630	-.03470	.02190	.03080
.903	-.020	-.37990	.29590	.01130	-.00780	.00560	.03230	.02400
	GRADIENT	.00182	-.00116	-.01950	.01433	-.00441	-.00058	.00058

MSFC 545 (IA1) NAR ATP BL ORBITER-(01) (R72505) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = -5.000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2728/ 0 RN/L = 6.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.197	-10.500	-.40580	.33740	.21760	-.15360	.05430	.05820	.04190
1.197	-8.460	-.40300	.33680	.17540	-.12580	.04520	.05770	.04320
1.197	-6.340	-.39110	.32990	.13170	-.09480	.03460	.05790	.04350
1.197	-4.220	-.38220	.32520	.08450	-.06030	.02260	.06060	.04290
1.197	-2.090	-.37810	.32430	.04300	-.03050	.01270	.06170	.04430
1.197	-.010	-.37130	.31980	.00380	-.00260	.00360	.06330	.04330
1.197	2.100	-.37090	.31900	-.03840	.02760	-.00650	.06330	.04280
1.197	4.230	-.36360	.31260	-.08210	.05980	-.01780	.06150	.04290
1.197	6.340	-.36130	.31010	-.12720	.09280	-.02920	.06010	.04430
1.197	8.440	-.35630	.30520	-.16950	.12210	-.03940	.06420	.03750
1.197	10.490	-.35940	.30620	-.20880	.14770	-.04820	.06550	.03640
1.197	.000	-.37630	.32320	.00390	-.00290	.00340	.06340	.04310
	GRADIENT	.00211	-.00145	-.01966	.01415	-.00474	.00016	-.00007

RUN NO. 2711/ 0 RN/L = 6.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.964	-10.640	-.24920	.19920	.21810	-.14840	.05530	.07060	.02160
1.964	-8.540	-.23520	.18930	.17270	-.11920	.04460	.07000	.02130
1.964	-6.420	-.22970	.18610	.13080	-.09160	.03460	.06980	.02090
1.964	-4.270	-.22550	.18370	.08600	-.06070	.02330	.07000	.02100
1.964	-2.120	-.21680	.17730	.04120	-.02900	.01170	.06870	.02160
1.964	.020	-.21100	.17320	-.00450	.00360	-.00020	.06860	.02160
1.964	2.130	-.21200	.17470	-.04720	.03410	-.01160	.06880	.02210
1.964	4.270	-.22170	.18190	-.09240	.06570	-.02330	.06910	.02250
1.964	6.440	-.22300	.18250	-.13690	.09580	-.03410	.06850	.02340
1.964	8.570	-.22530	.18350	-.17800	.12240	-.04360	.06830	.02430
1.964	10.650	-.23180	.18730	-.22010	.14910	-.05280	.06920	.02420
1.964	-.010	-.20880	.17130	-.00360	.00300	-.00020	.06750	.02170
	GRADIENT	.00058	-.00029	-.02087	.01481	-.00546	-.00008	.00016

MSFC 545 (IA1) NAR ATP BL ORBITER-(01) (R72505) (22 FEB 73)

REFERENCE DATA

SREF = 5220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = -5.000 CONFIG = 25.000
RUDDER = .000 AILRON = .000
RUDFLR = 10.000 ELEVTR = .000

RUN NO. 2706/ 0 RN/L = 5.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
2.990	-10.350	-.16920	.12970	.16910	-.10860	.03890	.06990	.01170
2.990	-8.340	-.16170	.12470	.13310	-.08500	.03080	.06930	.01160
2.990	-6.270	-.15690	.12110	.09800	-.06230	.02260	.06840	.01130
2.990	-4.190	-.15410	.11890	.06450	-.04110	.01500	.06710	.01150
2.990	-2.080	-.15370	.11810	.03060	-.01930	.00730	.06690	.01180
2.990	.000	-.14930	.11550	-.00250	.00170	.00000	.06680	.01220
2.990	2.090	-.14970	.11560	-.03540	.02280	-.00740	.06690	.01210
2.990	4.170	-.14850	.11460	-.06810	.04370	-.01470	.06630	.01220
2.990	6.280	-.15150	.11730	-.10330	.06630	-.02280	.06760	.01250
2.990	8.350	-.15490	.11930	-.13840	.08880	-.03090	.06840	.01240
2.990	10.350	-.15910	.12250	-.17460	.11230	-.03910	.06890	.01280
2.990	-.010	-.15030	.11660	-.00180	.00100	.00010	.06670	.01240
	GRADIENT	.00073	-.00053	-.01585	.01013	-.00355	-.00008	.00008

RUN NO. 2705/ 0 RN/L = 4.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.959	-10.070	-.12410	.09250	.12900	-.07980	.02800	.07000	.00300
4.959	-8.120	-.12200	.09010	.10010	-.06110	.02110	.06890	.00300
4.959	-6.110	-.12010	.08850	.07350	-.04450	.01520	.06720	.00320
4.959	-4.080	-.11690	.08610	.04730	-.02840	.00970	.06700	.00310
4.959	-2.030	-.11560	.08500	.02230	-.01280	.00470	.06550	.00330
4.959	.000	-.11110	.08220	-.00260	.00220	-.00010	.06570	.00320
4.959	2.030	-.11260	.08300	-.02770	.01680	-.00530	.06520	.00320
4.959	4.060	-.10930	.08110	-.05160	.03180	-.00970	.06610	.00330
4.959	6.090	-.11450	.08460	-.07930	.04860	-.01620	.06650	.00320
4.959	8.120	-.11450	.08490	-.10650	.06620	-.02220	.06750	.00340
4.959	10.060	-.12100	.08970	-.13480	.08470	-.02880	.06930	.00340
4.959	-.010	-.11300	.08320	-.00270	.00140	.00000	.06650	.00330
	GRADIENT	.00089	-.00059	-.01218	.00737	-.00240	-.00010	.00001

MSFC 545 (IA1) NAR ATP BL LV-(T3) (Z72601) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 20.000

RUN NO. 1940/ 0 RN/L = 4.91 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-10.150	-.04790	-.04950	.01240	.00300	.00000	-.00660	.02630
.598	-8.240	-.02940	-.04490	.01240	.00300	.00000	-.00150	.02190
.598	-6.230	-.02250	-.03670	.00800	.00450	.00000	.00260	.01790
.598	-4.160	-.01290	-.02580	.00820	.00660	.00020	.00380	.01470
.598	-2.160	-.00580	-.01370	.00820	.00640	.00010	.01040	.00760
.598	-.130	.00360	-.00070	.00720	.00770	.00000	.01040	.00670
.598	1.860	.00830	.00970	.00610	.00830	.00000	.01350	.00320
.598	3.900	.01790	.02280	.00740	.00830	.00000	.01410	.00350
.598	5.960	.02270	.03450	.00740	.00890	-.00030	.01200	.00580
.598	7.970	.03200	.04430	.00640	.00880	.00000	.00340	.01640
.598	9.870	.04840	.04990	.00770	.00880	.00010	-.00480	.02290
.598	-.130	.00590	-.00310	.00840	.00780	.00010	.01170	.00580
	GRADIENT	.00376	.00599	-.00018	.00026	-.00002	.00118	-.00133

RUN NO. 1941/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-10.270	-.09070	-.02620	.01220	-.00110	.00000	.01100	.02630
.902	-8.330	-.07040	-.02010	.01300	-.00030	.00000	.01390	.02170
.902	-6.290	-.05170	-.01610	.00980	.00130	.00000	.01880	.01550
.902	-4.230	-.03640	-.00980	.01050	.00180	.00000	.01720	.01440
.902	-2.180	-.01910	-.00450	.01140	.00230	.00000	.01940	.01190
.902	-.140	-.00160	-.00110	.01090	.00330	.00000	.01570	.01310
.902	1.890	.01580	.00360	.01040	.00350	.00000	.01180	.01640
.902	3.940	.03600	.00780	.00850	.00480	.00000	.01050	.02230
.902	6.030	.05360	.01380	.00860	.00580	.00000	.00040	.03400
.902	8.050	.07020	.01840	.00810	.00620	-.00010	-.01020	.04530
.902	9.980	.08890	.02430	.00820	.00650	.00000	-.01180	.04720
.902	-.130	.00090	.00000	.01010	.00320	.00000	.01520	.01280
	GRADIENT	.00880	.00212	-.00024	.00035	.00000	-.00103	.00099

MSFC 545 (IA1) NAR ATP BL LV-(T3) (Z72601) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 20.000

RUN NO. 1942/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-10.320	-.09140	-.03110	.01110	-.00080	.00000	.02710	.05760
.999	-8.370	-.07270	-.02490	.01060	.00010	-.00010	.03030	.05340
.999	-6.310	-.05290	-.01710	.01140	.00140	.00000	.03490	.04630
.999	-4.260	-.03700	-.01020	.01030	.00180	-.00010	.03560	.04360
.999	-2.190	-.01860	-.00430	.00990	.00260	.00000	.03560	.04230
.999	-.130	.00090	.00130	.00940	.00320	-.00010	.03390	.04270
.999	1.890	.01810	.00700	.00770	.00440	-.00020	.03090	.04500
.999	3.960	.03400	.01330	.00780	.00540	.00000	.03200	.04590
.999	6.050	.05300	.02020	.00860	.00590	.00000	.03040	.04630
.999	8.090	.07080	.02760	.00870	.00670	.00000	.03300	.05010
.999	10.050	.09170	.03470	.00950	.00650	.00000	.03020	.05360
.999	-.130	-.00260	.00250	.01060	.00340	-.00010	.03090	.04220
	GRADIENT	.00871	.00284	-.00035	.00044	.00000	-.00058	.00035

RUN NO. 1943/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-10.380	-.09600	-.03520	.00940	.00160	-.00020	.05020	.04850
1.200	-8.410	-.07310	-.02900	.00850	.00320	-.00020	.05130	.04430
1.200	-6.360	-.05450	-.02110	.00700	.00440	-.00020	.05390	.03850
1.200	-4.270	-.03480	-.01300	.00820	.00490	-.00020	.05480	.03470
1.200	-2.210	-.01940	-.00460	.00510	.00720	-.00040	.05560	.03270
1.200	-.130	-.00190	.00380	.00640	.00740	-.00010	.05410	.03450
1.200	1.920	.01440	.01080	.00580	.00890	.00000	.05280	.03450
1.200	3.960	.03110	.02000	.00450	.00980	-.00020	.05350	.03440
1.200	6.090	.05170	.02630	.00570	.00990	-.00020	.05280	.03870
1.200	8.140	.07230	.03330	.00480	.01010	-.00020	.05170	.04320
1.200	10.090	.09620	.03970	.00600	.00960	-.00020	.04830	.04690
1.200	-.130	-.00180	.00430	.00530	.00830	-.00010	.05560	.03290
	GRADIENT	.00804	.00395	-.00042	.00056	.00002	-.00026	.00006

MSFC 545 (1A1) NAR ATP BL LV-(T3) (Z72601) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 20.000

RUN NO. 1984/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-10.390	-.09740	-.04050	.00890	-.00050	-.00010	.00000	.00000
1.462	-8.420	-.07210	-.03300	.00910	.00030	-.00020	.00000	.00000
1.462	-6.330	-.05000	-.02570	.00870	.00140	-.00020	.00000	.00000
1.462	-4.280	-.03200	-.01660	.00780	.00210	-.00020	.00000	.00000
1.462	-2.210	-.01500	-.00760	.00900	.00250	-.00030	.00000	.00000
1.462	-.150	.00180	.00050	.00760	.00360	-.00020	.00000	.00000
1.462	1.930	.01990	.01020	.00880	.00380	-.00020	.00000	.00000
1.462	3.990	.03580	.01870	.00790	.00510	-.00020	.00000	.00000
1.462	6.150	.05690	.02760	.00800	.00570	-.00040	.00000	.00000
1.462	8.170	.08010	.03480	.00870	.00580	-.00030	.00000	.00000
1.462	10.130	.10750	.04170	.00990	.00610	-.00020	.00000	.00000
1.462	-.120	.00390	.00060	.00760	.00370	-.00030	.00000	.00000
	GRADIENT	.00824	.00427	.00000	.00035	.00000	.00000	.00000

RUN NO. 1948/ 0 RN/L = 6.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.960	-10.460	-.11690	-.03790	.00960	.00010	-.00020	.05430	.02510
1.960	-8.480	-.08320	-.03340	.00830	.00090	-.00020	.05410	.02290
1.960	-6.380	-.05680	-.02640	.00810	.00240	-.00010	.05380	.01990
1.960	-4.280	-.03620	-.01760	.00820	.00280	-.00010	.05520	.01720
1.960	-2.210	-.01770	-.00860	.00740	.00320	-.00030	.05710	.01580
1.960	-.130	.00180	.00070	.00700	.00380	-.00030	.05450	.01690
1.960	1.940	.01950	.01000	.00770	.00460	-.00030	.05450	.01710
1.960	4.010	.03720	.01910	.00730	.00540	-.00030	.05440	.01840
1.960	6.120	.06250	.02800	.00750	.00570	-.00030	.05330	.02170
1.960	8.210	.08780	.03490	.00860	.00570	-.00040	.05430	.02450
1.960	10.220	.12480	.03920	.01030	.00550	-.00030	.05470	.02690
1.960	-.130	.00080	.00100	.00650	.00410	-.00030	.05540	.01610
	GRADIENT	.00888	.00444	-.00007	.00032	-.00002	-.00020	.00018

MSFC 545 (IA1) NAR ATP BL LV-(T3) (Z72601) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 20.000

RUN NO. 1901/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.959	-6.230	-.07390	-.02130	.00780	.00150	-.00010	.04670	.00040
4.959	-4.170	-.04780	-.01480	.01120	.00120	.00000	.04360	.00070
4.959	-2.180	-.02510	-.00880	.00810	.00270	.00000	.04140	.00070
4.959	-.150	.00400	-.00030	.00830	.00310	.00000	.03920	.00220
4.959	1.900	.02660	.00710	.00670	.00290	-.00060	.03950	.00260
4.959	3.910	.05240	.01360	.00680	.00210	-.00060	.04150	.00250
4.959	5.970	.07840	.01860	.00710	.00250	.00000	.04360	.00260
4.959	7.980	.10090	.02370	.00710	.00180	-.00080	.04670	.00310
4.959	9.880	.13320	.02350	.00890	.00120	.00000	.04840	.00330
4.959	-10.180	-.12880	-.02470	.00900	.00060	-.00080	.05410	-.00080
4.959	-8.250	-.09970	-.02230	.00930	.00140	.00000	.05040	-.00010
	GRADIENT	.01246	.00359	-.00050	.00010	-.00009	-.00030	.00027

MSFC 545 (IA1) NAR ATP BL LV-(T3) (Z72602) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 20.000

RUN NO. 1840/ 0 RN/L = 4.91 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-10.150	-.01240	-.00300	.04790	.04950	.00000	-.00660	.02630
.598	-8.240	-.01240	-.00300	.02940	.04490	.00000	-.00150	.02190
.598	-6.230	-.00800	-.00450	.02250	.03670	.00000	.00260	.01790
.598	-4.160	-.00820	-.00660	.01290	.02580	.00020	.00380	.01470
.598	-2.160	-.00820	-.00640	.00580	.01370	.00010	.01040	.00760
.598	-.130	-.00720	-.00770	-.00360	.00070	.00000	.01040	.00670
.598	1.860	-.00610	-.00830	-.00830	-.00970	.00000	.01350	.00320
.598	3.900	-.00740	-.00830	-.01790	-.02280	.00000	.01410	.00350
.598	5.960	-.00740	-.00890	-.02270	-.03450	-.00030	.01200	.00580
.598	7.970	-.00640	-.00880	-.03200	-.04430	.00000	.00340	.01640
.598	9.870	-.00770	-.00880	-.04840	-.04990	.00010	-.00480	.02290
.598	-.130	-.00840	-.00780	-.00590	.00310	.00010	.01170	.00580
	GRADIENT	.00018	-.00026	-.00376	-.00599	-.00002	.00118	-.00133

RUN NO. 1841/ 0 RN/L = 6.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.902	-10.150	-.01220	.00110	.09070	.02620	.00000	.01100	.02630
.902	-8.240	-.01300	.00030	.07040	.02010	.00000	.01390	.02170
.902	-6.230	-.00980	-.00130	.05170	.01610	.00000	.01880	.01550
.902	-4.160	-.01050	-.00180	.03640	.00980	.00000	.01720	.01440
.902	-2.160	-.01140	-.00230	.01910	.00450	.00000	.01940	.01190
.902	-.130	-.01090	-.00330	.00160	.00110	.00000	.01570	.01310
.902	1.860	-.01040	-.00350	-.01580	-.00360	.00000	.01180	.01640
.902	3.900	-.00850	-.00480	-.03600	-.00780	.00000	.01050	.02230
.902	5.960	-.00860	-.00580	-.05360	-.01380	.00000	.00040	.03400
.902	7.970	-.00810	-.00620	-.07020	-.01840	-.00010	-.01020	.04530
.902	9.870	-.00820	-.00650	-.08890	-.02430	.00000	-.01180	.04720
.902	-.130	-.01010	-.00320	-.00090	.00000	.00000	.01520	.01280
	GRADIENT	.00025	-.00036	-.00892	-.00215	.00000	-.00104	.00101

MSFC 545 (IA1) NAR ATP BL LV-(T3) (Z72602) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 20.000

RUN NO. 1842/ 0 RN/L = 6.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-10.150	-.01110	.00080	.09140	.03110	.00000	.02710	.05760
.999	-8.240	-.01060	-.00010	.07270	.02490	-.00010	.03030	.05340
.999	-6.230	-.01140	-.00140	.05290	.01710	.00000	.03490	.04630
.999	-4.160	-.01030	-.00180	.03700	.01020	-.00010	.03560	.04360
.999	-2.160	-.00990	-.00260	.01860	.00430	.00000	.03560	.04230
.999	-.130	-.00940	-.00320	-.00090	-.00130	-.00010	.03390	.04270
.999	1.860	-.00770	-.00440	-.01810	-.00700	-.00020	.03090	.04500
.999	3.900	-.00780	-.00540	-.03400	-.01330	.00000	.03200	.04590
.999	5.960	-.00860	-.00590	-.05300	-.02020	.00000	.03040	.04630
.999	7.970	-.00870	-.00670	-.07080	-.02760	.00000	.03300	.05010
.999	9.870	-.00950	-.00650	-.09170	-.03470	.00000	.03020	.05360
.999	-.130	-.01060	-.00340	.00260	-.00250	-.00010	.03090	.04220
	GRADIENT	.00036	-.00045	-.00887	-.00289	.00000	-.00059	.00036

RUN NO. 1843/ 0 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.200	-10.150	-.00940	-.00160	.09600	.03520	-.00020	.05020	.04850
1.200	-8.240	-.00850	-.00320	.07310	.02900	-.00020	.05130	.04430
1.200	-6.230	-.00700	-.00440	.05450	.02110	-.00020	.05390	.03850
1.200	-4.160	-.00820	-.00490	.03480	.01300	-.00020	.05480	.03470
1.200	-2.160	-.00510	-.00720	.01940	.00460	-.00040	.05560	.03270
1.200	-.130	-.00640	-.00740	.00190	-.00380	-.00010	.05410	.03450
1.200	1.860	-.00380	-.00890	-.01440	-.01080	.00000	.05280	.03450
1.200	3.900	-.00450	-.00980	-.03110	-.02000	-.00020	.05350	.03440
1.200	5.960	-.00570	-.00990	-.05170	-.02630	-.00020	.05280	.03870
1.200	7.970	-.00480	-.01010	-.07230	-.03330	-.00020	.05170	.04320
1.200	9.870	-.00600	-.00960	-.09620	-.03970	-.00020	.04830	.04890
1.200	-.130	-.00530	-.00830	.00180	-.00430	-.00010	.05560	.03290
	GRADIENT	.00043	-.00057	-.00822	-.00404	.00002	-.00027	.00006

MSFC 545 (IA1) NAR ATP BL LV-(T3) (Z72602) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 20.000

RUN NO. 1884/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.462	-10.150	-.00890	-.00050	.09740	.04050	-.00010	.00000	.00000
1.462	-8.240	-.00910	-.00030	.07210	.03300	-.00020	.00000	.00000
1.462	-6.230	-.00870	-.00140	.05000	.02570	-.00020	.00000	.00000
1.462	-4.160	-.00780	-.00210	.03200	.01660	-.00020	.00000	.00000
1.462	-2.160	-.00900	-.00250	.01500	.00760	-.00030	.00000	.00000
1.462	-.130	-.00760	-.00360	-.00180	-.00050	-.00020	.00000	.00000
1.462	1.860	-.00880	-.00380	-.01990	-.01020	-.00020	.00000	.00000
1.462	3.900	-.00790	-.00510	-.03580	-.01870	-.00020	.00000	.00000
1.462	5.960	-.00800	-.00570	-.05690	-.02760	-.00040	.00000	.00000
1.462	7.970	-.00870	-.00580	-.08010	-.03480	-.00030	.00000	.00000
1.462	9.870	-.00990	-.00610	-.10750	-.04170	-.00020	.00000	.00000
1.462	-.130	-.00760	-.00370	-.00390	-.00060	-.00030	.00000	.00000
	GRADIENT	.00000	-.00036	-.00847	-.00439	.00000	.00000	.00000

RUN NO. 1848/ 0 RN/L = 6.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.960	-10.150	-.00960	-.00010	.11690	.03790	-.00020	.05430	.02510
1.960	-8.240	-.00830	-.00090	.08320	.03340	-.00020	.05410	.02290
1.960	-6.230	-.00810	-.00240	.05680	.02640	-.00010	.05380	.01990
1.960	-4.160	-.00820	-.00280	.03620	.01760	-.00010	.05520	.01720
1.960	-2.160	-.00740	-.00320	.01770	.00860	-.00030	.05710	.01580
1.960	-.130	-.00700	-.00380	-.00180	-.00070	-.00030	.05450	.01690
1.960	1.860	-.00770	-.00460	-.01950	-.01000	-.00030	.05450	.01710
1.960	3.900	-.00730	-.00540	-.03720	-.01910	-.00030	.05440	.01840
1.960	5.960	-.00750	-.00570	-.06250	-.02800	-.00030	.05330	.02170
1.960	7.970	-.00860	-.00570	-.08780	-.03490	-.00040	.05430	.02450
1.960	9.870	-.01030	-.00550	-.12480	-.03920	-.00030	.05470	.02690
1.960	-.130	-.00650	-.00410	-.00080	-.00100	-.00030	.05540	.01610
	GRADIENT	.00007	-.00033	-.00914	-.00457	-.00002	-.00021	.00018

MSFC 545 (IA1) NAR ATP BL LV-(T3) (Z72602) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 20.000

RUN NO. 1801/ 0 RN/L = 4.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.959	-6.230	-.00780	-.00150	.07390	.02130	-.00010	.04670	.00040
4.959	-4.170	-.01120	-.00120	.04780	.01480	.00000	.04360	.00070
4.959	-2.180	-.00810	-.00270	.02510	.00880	.00000	.04140	.00070
4.959	-.150	-.00830	-.00310	-.00400	.00030	.00000	.03920	.00220
4.959	1.900	-.00670	-.00290	-.02660	-.00710	-.00060	.03950	.00260
4.959	3.910	-.00680	-.00210	-.05240	-.01360	-.00060	.04150	.00250
4.959	5.970	-.00710	-.00250	-.07840	-.01860	.00000	.04360	.00260
4.959	7.980	-.00710	-.00180	-.10090	-.02370	-.00080	.04670	.00310
4.959	9.880	-.00890	-.00120	-.13320	-.02350	.00000	.04840	.00330
4.959	-10.180	-.00900	-.00060	.12880	.02470	-.00080	.05410	-.00080
4.959	-8.250	-.00930	-.00140	.09970	.02230	.00000	.05040	-.00010
	GRADIENT	.00050	-.00010	-.01246	-.00359	-.00009	-.00030	.00027

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (Z72701) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 18.000
X-SRB = .000

RUN NO. 1924/ 0 RN/L = 4.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.598	-10.480	-.36460	-.00600	.02980	-.01260	-.00370	.08530	.04590
.598	-8.510	-.28880	-.00410	.02660	-.01090	-.00370	.09400	.04270
.598	-6.440	-.21660	-.00050	.02140	-.00860	-.00340	.09900	.04290
.598	-4.340	-.15000	.00130	.01850	-.00590	-.00250	.10330	.04130
.598	-2.240	-.08370	.00810	.01670	-.00440	-.00110	.10360	.04220
.598	-.150	-.00850	.01040	.01620	-.00330	.00010	.10210	.04250
.598	1.910	.05540	.00920	.01320	-.00140	.00100	.10240	.04070
.598	4.010	.13110	.00820	.01150	.00130	.00260	.09790	.04410
.598	6.170	.19230	.01040	.00740	.00350	.00350	.10070	.03730
.598	8.170	.26000	.01680	.01020	.00470	.00470	.09920	.03450
.598	10.160	.33630	.02130	.01080	.00570	.00600	.09210	.03290
.598	-.150	-.00610	.00970	.01620	-.00270	.00060	.10400	.04080
	GRADIENT	.03364	.00072	-.00084	.00083	.00059	-.00059	.00020

RUN NO. 1925/ 0 RN/L = 6.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.900	-10.920	-.42470	-.00900	.02340	-.01130	-.00410	.10830	.06200
.900	-8.830	-.32660	-.00700	.02080	-.00990	-.00390	.11550	.05950
.900	-6.650	-.25020	.00600	.01940	-.00790	-.00340	.12510	.05630
.900	-4.480	-.17530	.01690	.01840	-.00700	-.00220	.13250	.05420
.900	-2.300	-.09460	.01670	.01700	-.00630	-.00140	.13150	.05180
.900	-.160	-.01030	.00740	.01700	-.00510	-.00010	.13310	.05110
.900	1.970	.07550	-.00550	.01610	-.00420	.00070	.13340	.05060
.900	4.130	.15910	-.00790	.01400	-.00150	.00210	.13190	.04920
.900	6.450	.23650	-.00670	.01500	-.00030	.00330	.12750	.05380
.900	8.470	.31450	-.00060	.01700	.00100	.00420	.12030	.05410
.900	10.510	.39650	.00210	.01890	.00160	.00550	.11170	.05420
.900	-.160	-.01040	.00740	.01560	-.00470	-.00010	.13230	.05140
	GRADIENT	.03903	-.00334	-.00045	.00061	.00050	.00003	-.00052

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (Z72701) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 18.000
X-SRB = .000

RUN NO. 1926/ 0 RN/L = 6.35 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
.999	-11.060	-.43800	-.01990	.02110	-.01040	-.00410	.15540	.06810
.999	-8.940	-.33690	-.01750	.01990	-.00980	-.00390	.16360	.06520
.999	-6.730	-.24680	-.00870	.01680	-.00730	-.00340	.17190	.06170
.999	-4.530	-.16820	.00260	.01800	-.00640	-.00220	.17790	.05830
.999	-2.330	-.08690	.00700	.01670	-.00510	-.00120	.18390	.05430
.999	-.170	-.00450	.00680	.01600	-.00450	-.00030	.18480	.05290
.999	2.020	.08060	.00540	.01600	-.00350	.00070	.18360	.05190
.999	4.190	.15920	.00750	.01350	-.00060	.00180	.18300	.05070
.999	6.590	.25140	.00920	.01480	.00000	.00330	.17320	.05420
.999	8.630	.33700	.01340	.01710	.00100	.00460	.17010	.05340
.999	10.700	.43210	.01650	.01830	.00190	.00540	.16070	.05510
.999	-.140	-.00200	.00750	.01730	-.00470	.00000	.18110	.05350
	GRADIENT	.03774	.00038	-.00045	.00061	.00045	.00046	-.00081

RUN NO. 1927/ 0 RN/L = 6.52 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-11.250	-.45750	-.02730	.01280	-.00430	-.00350	.16280	.06370
1.199	-9.090	-.34890	-.02850	.01280	-.00340	-.00370	.18590	.06380
1.199	-6.840	-.25350	-.02170	.01380	-.00310	-.00330	.19090	.05970
1.199	-4.610	-.16910	-.01030	.01280	-.00170	-.00240	.19240	.05790
1.199	-2.400	-.08690	-.00490	.01170	-.00020	-.00130	.19180	.05740
1.199	-.170	-.00360	-.00060	.01070	.00160	-.00040	.19410	.05410
1.199	2.030	.07740	.00330	.01070	.00280	.00050	.19530	.05160
1.199	4.230	.15670	.01280	.00970	.00500	.00180	.19450	.05250
1.199	6.540	.24620	.02240	.01150	.00670	.00320	.19260	.05200
1.199	8.760	.33960	.02670	.01370	.00650	.00430	.18810	.05340
1.199	10.910	.44730	.02960	.01590	.00680	.00460	.18410	.05300
1.199	-.150	.00070	.00080	.01180	.00130	-.00020	.19410	.05310
	GRADIENT	.03690	.00246	-.00033	.00074	.00046	.00035	-.00075

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (Z72701) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 18.000
X-SRB = .000

RUN NO. 1980/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-11.310	-.47770	-.01780	.01780	-.00830	-.00310	.23440	.00570
1.463	-9.110	-.35290	-.01950	.01890	-.00860	-.00330	.23680	.00170
1.463	-6.810	-.24960	-.01220	.01800	-.00750	-.00290	.23550	.00530
1.463	-4.590	-.16780	-.00060	.01650	-.00480	-.00210	.23430	.00610
1.463	-2.400	-.09020	.00700	.01550	-.00260	-.00120	.22510	.01330
1.463	-.170	-.00560	.00700	.01440	-.00140	-.00040	.21880	.01610
1.463	2.020	.07580	.00500	.01540	-.00100	.00010	.21910	.01690
1.463	4.270	.15750	.01390	.01710	.00010	.00150	.22570	.01130
1.463	6.530	.24640	.02260	.01920	.00060	.00220	.21850	.01730
1.463	8.800	.34700	.02790	.02090	.00220	.00310	.21280	.01820
1.463	10.980	.47010	.02680	.02420	.00250	.00360	.20900	.01830
1.463	-.130	.00060	.00750	.01500	-.00130	-.00030	.21720	.01830
	GRADIENT	.03688	.00122	.00005	.00051	.00038	-.00104	.00063

RUN NO. 1952/ 0 RN/L = 6.91 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.966	-11.390	-.51930	.02240	.01840	-.00670	-.00160	.00000	.00000
1.966	-9.190	-.38720	.00830	.02800	-.01020	-.00210	.00000	.00000
1.966	-6.900	-.26640	-.00020	.01990	-.00520	-.00230	.00000	.00000
1.966	-4.600	-.16600	.00020	.01670	-.00380	-.00160	.00000	.00000
1.966	-2.370	-.08240	.00360	.01580	-.00160	-.00060	.00000	.00000
1.966	-.180	-.00410	.00040	.01500	-.00020	-.00020	.00000	.00000
1.966	2.040	.07840	-.00210	.01590	.00050	.00050	.00000	.00000
1.966	4.290	.16160	.00140	.01490	.00210	.00130	.00000	.00000
1.966	6.580	.25880	.00220	.01890	.00190	.00240	.00000	.00000
1.966	8.860	.37610	-.00370	.02610	-.00070	.00290	.00000	.00000
1.966	11.060	.50950	-.02310	.02870	-.00020	.00260	.00000	.00000
1.966	-.150	.00070	.00190	.01460	-.00020	-.00010	.00000	.00000
	GRADIENT	.03677	-.00015	-.00016	.00063	.00031	.00000	.00000

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (Z72701) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

BETA = .000 CONFIG = 18.000
X-SRB = .000

RUN NO. 1905/ 0 RN/L = 4.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.959	-10.340	-.34400	.01870	.00980	-.00050	-.00090	.12780	.00130
4.959	-8.390	-.27640	.01170	.01010	-.00100	-.00130	.12400	.00250
4.959	-6.330	-.20550	.00920	.01210	-.00080	-.00090	.12440	.00030
4.959	-4.260	-.13790	.00460	.01070	-.00030	-.00110	.12170	.00200
4.959	-2.210	-.06990	.00620	.01440	.00080	-.00080	.12090	.00290
4.959	-.150	.00100	.00220	.01000	.00380	-.00020	.11420	.00520
4.959	1.890	.06540	.00400	.01350	.00160	.00000	.11510	.00590
4.959	3.920	.12650	.00230	.01220	.00130	.00040	.11490	.00660
4.959	6.030	.19720	-.00170	.01420	.00000	.00090	.11250	.00670
4.959	8.040	.26490	-.00790	.01610	-.00020	.00070	.11270	.00700
4.959	10.010	.33570	-.01660	.01320	.00110	.00090	.11520	.00660
	GRADIENT	.03246	-.00033	.00010	.00020	.00019	-.00095	.00060

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (Z72801) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 18.000
X-SRB = .000

RUN NO. 1931/ 0 RN/L = 4.91 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.600	-10.020	.04770	-.00700	.11510	-.01470	.00940	.06470	.07620
.600	-8.120	.05150	-.00350	.09690	-.01340	.00830	.06710	.07430
.600	-6.090	.04580	.00170	.07030	-.00950	.00680	.07700	.06320
.600	-4.070	.03830	.00780	.04970	-.00640	.00500	.08160	.06040
.600	-2.040	.03750	.01000	.02690	-.00310	.00340	.08550	.05770
.600	-.030	.03910	.01100	.00860	-.00050	.00190	.08430	.06080
.600	2.010	.03790	.01160	-.01990	.00370	-.00010	.08950	.05530
.600	4.030	.03730	.01380	-.03810	.00690	-.00180	.08760	.05600
.600	6.120	.04070	.01240	-.06320	.01080	-.00420	.08630	.05580
.600	8.080	.04230	.01180	-.08750	.01450	-.00580	.08600	.05620
.600	10.020	.04600	.01150	-.10730	.01590	-.00750	.08130	.06060
.600	.000	.04120	.00920	.00630	.00000	.00140	.08580	.05940
	GRADIENT	-.00008	.00067	-.01098	.00165	-.00084	.00079	-.00055

RUN NO. 1930/ 0 RN/L = 6.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
.903	-10.150	.04240	-.01380	.13630	-.02040	.00800	.11050	.08280
.903	-8.220	.04240	-.00990	.11390	-.01980	.00690	.11420	.07880
.903	-6.150	.03960	-.00650	.08730	-.01860	.00590	.11800	.06850
.903	-4.080	.04020	-.00330	.06150	-.01510	.00460	.11910	.06660
.903	-2.040	.03820	-.00120	.03420	-.00880	.00310	.11880	.06690
.903	.000	.03590	.00080	.00450	-.00110	.00100	.11890	.06450
.903	2.030	.03550	.00250	-.02620	.00790	-.00080	.12310	.06000
.903	4.070	.03220	.00440	-.05380	.01510	-.00270	.12430	.05760
.903	6.210	.03370	.00710	-.08070	.02030	-.00450	.12260	.06060
.903	8.180	.03650	.00690	-.10730	.02210	-.00610	.12390	.06570
.903	10.130	.03640	.00620	-.13050	.02260	-.00790	.12000	.07180
.903	.000	.03600	.00110	.00520	-.00100	.00120	.12150	.06430
	GRADIENT	-.00092	.00094	-.01429	.00378	-.00091	.00072	-.00122

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (Z72801) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 18.000
X-SRB = .000

RUN NO. 1929/ 0 RN/L = 6.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.001	-10.200	.04180	-.00750	.15260	-.02420	.00880	.15800	.08790
1.001	-8.240	.04040	-.00390	.12540	-.02290	.00750	.16180	.08270
1.001	-6.180	.03770	-.00050	.09710	-.02170	.00620	.16790	.07230
1.001	-4.120	.03540	.00270	.06800	-.01800	.00450	.16970	.06870
1.001	-2.050	.03330	.00640	.03690	-.01120	.00270	.16890	.06870
1.001	.000	.03030	.00900	.00600	-.00230	.00090	.16850	.06930
1.001	2.060	.03100	.01060	-.03160	.00940	-.00130	.17010	.06730
1.001	4.090	.03130	.01250	-.06260	.01710	-.00370	.17450	.06300
1.001	6.280	.03280	.01430	-.09190	.02140	-.00580	.17040	.06830
1.001	8.230	.03220	.01560	-.12100	.02270	-.00750	.17240	.06940
1.001	10.190	.03570	.01330	-.14710	.02370	-.00920	.16640	.07910
1.001	.000	.03160	.00900	.00480	-.00220	.00050	.16510	.07180
	GRADIENT	-.00051	.00116	-.01606	.00442	-.00099	.00052	-.00062

RUN NO. 1928/ 0 RN/L = 6.53 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.199	-10.270	.01740	-.00230	.15820	-.01820	.00710	.18080	.07520
1.199	-8.300	.02130	.00000	.12830	-.01680	.00610	.18010	.07310
1.199	-6.220	.02070	.00000	.09540	-.01490	.00460	.17870	.07100
1.199	-4.150	.02270	.00210	.06720	-.01200	.00330	.17850	.06910
1.199	-2.090	.02150	.00450	.03620	-.00720	.00190	.17980	.06810
1.199	.000	.02170	.00870	.00330	.00020	.00030	.18010	.06930
1.199	2.050	.01980	.01020	-.03230	.00930	-.00110	.18240	.06540
1.199	4.110	.01880	.01320	-.06510	.01560	-.00310	.18530	.06380
1.199	6.290	.01840	.01480	-.09630	.01810	-.00490	.18520	.06450
1.199	8.300	.01700	.01650	-.12560	.01940	-.00660	.18720	.06590
1.199	10.240	.01850	.01710	-.15510	.01930	-.00830	.18830	.06710
1.199	.000	.01950	.00910	.00220	.00030	.00030	.17960	.07000
	GRADIENT	-.00046	.00135	-.01612	.00347	-.00076	.00078	-.00064

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (Z72801) (22 FEB 73)

REFERENCE DATA

AREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 18.000
X-SRB = .000

RUN NO. 1981/ 0 RN/L = 6.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.463	-10.350	.02200	-.00750	.15860	-.00250	.00630	.17700	.07050
1.463	-8.350	.02210	-.00550	.12500	-.00350	.00500	.17530	.06920
1.463	-6.240	.02550	-.00260	.09380	-.00420	.00410	.17340	.06790
1.463	-4.170	.02360	-.00020	.06210	-.00460	.00270	.17460	.06400
1.463	-2.110	.02320	.00420	.03410	-.00430	.00160	.17420	.06320
1.463	-.020	.02300	.00680	.00260	-.00030	.00030	.17440	.06280
1.463	2.060	.02270	.00730	-.03040	.00390	-.00120	.17470	.06250
1.463	4.140	.02110	.00940	-.06150	.00570	-.00290	.17740	.06250
1.463	6.280	.02220	.00970	-.09370	.00440	-.00460	.17850	.06570
1.463	8.350	.02350	.00760	-.12390	.00350	-.00570	.17930	.06580
1.463	10.330	.02340	.00680	-.15510	.00060	-.00710	.18060	.06660
1.463	.000	.02090	.00640	.00210	-.00010	.00010	.17490	.06230
	GRADIENT	-.00026	.00107	-.01499	.00139	-.00067	.00029	-.00018

RUN NO. 1951/ 0 RN/L = 6.91 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
1.968	-10.430	.02260	.00010	.17550	.00110	.00750	.00000	.00000
1.968	-8.430	.02440	.00040	.13560	.00240	.00600	.00000	.00000
1.968	-6.320	.02310	.00140	.09750	.00200	.00450	.00000	.00000
1.968	-4.190	.02190	.00300	.06490	.00000	.00310	.00000	.00000
1.968	-2.090	.02220	.00560	.03150	.00000	.00150	.00000	.00000
1.968	.000	.02240	.00740	-.00190	.00150	-.00020	.00000	.00000
1.968	2.090	.02250	.00780	-.03570	.00260	-.00190	.00000	.00000
1.968	4.190	.02350	.00810	-.06820	.00230	-.00380	.00000	.00000
1.968	6.340	.02410	.00750	-.10100	.00050	-.00530	.00000	.00000
1.968	8.460	.02390	.00710	-.13950	.00010	-.00660	.00000	.00000
1.968	10.430	.02650	.00630	-.17970	.00150	-.00850	.00000	.00000
1.968	.000	.02150	.00730	-.00240	.00170	-.00030	.00000	.00000
	GRADIENT	.00017	.00059	-.01592	.00034	-.00082	.00000	.00000

MSFC 545 (IA1) NAR ATP BL LV-(T3)(S1) (Z72801) (22 FEB 73)

REFERENCE DATA

SREF = 3220.0000 SQ.FT. XMRP = .0000
LREF = 1328.0000 IN. YMRP = .0000
BREF = 1328.0000 IN. ZMRP = .0000
SCALE = 100.0000 PERCNT

PARAMETRIC DATA

ALPHA = .000 CONFIG = 18.000
X-SRB = .000

RUN NO. 1904/ 0 RN/L = 4.83 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CN	CLM	CY	CYN	CBL	CAF	CAB
4.959	-10.030	.01070	.00360	.18320	-.02410	.00590	.13290	.00670
4.959	-8.130	.00970	.00220	.14140	-.01260	.00430	.12580	.00670
4.959	-6.080	.01180	.00210	.10420	-.00450	.00290	.12200	.00660
4.959	-4.060	.00750	.00480	.07190	.00160	.00220	.11760	.00640
4.959	-2.030	.01230	.00360	.03630	.00500	.00170	.11630	.00660
4.959	.000	.00970	.00380	.00020	.00040	.00010	.11480	.00640
4.959	2.030	.01360	.00340	-.03400	-.00370	-.00120	.11590	.00650
4.959	4.040	.01200	.00430	-.07130	.00010	-.00210	.11780	.00660
4.959	6.130	.01060	.00370	-.10850	.00630	-.00310	.12230	.00660
4.959	8.130	.00960	.00380	-.14390	.01460	-.00400	.12660	.00660
4.959	10.050	.00860	.00390	-.18420	.02560	-.00580	.13270	.00690
	GRADIENT	.00051	-.00006	-.01761	-.00058	-.00057	-.00000	.00001